

AMERICAN ARTISAN and Hardware Record

VOL. 85. No. 25.

620 SOUTH MICHIGAN AVENUE, CHICAGO, JUNE 23, 1923.

\$2.00 Per Year.

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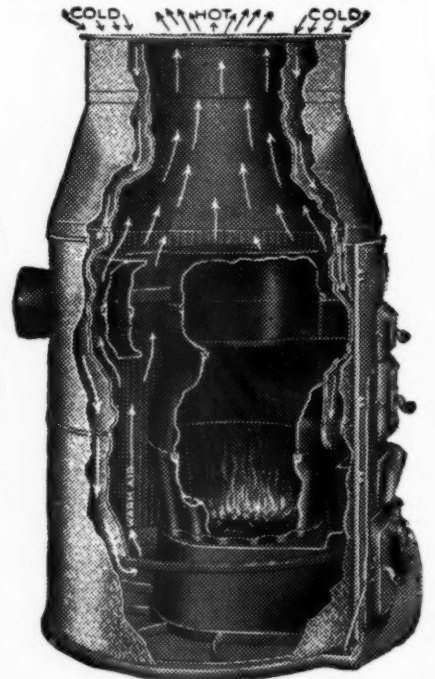
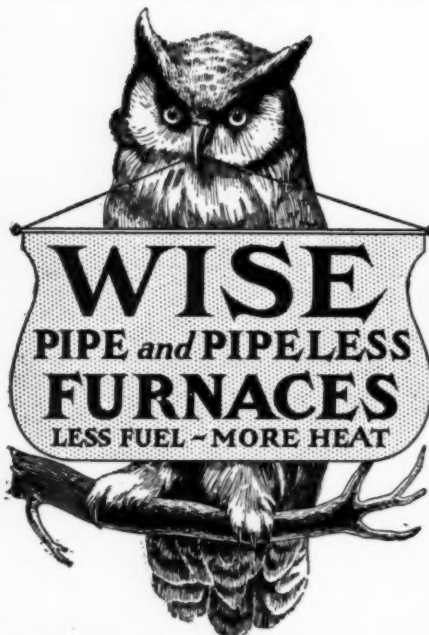
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WHY SOME TRADE ORGANIZATIONS FALL SHORT OF COMPLETE SUCCESS

Whenever the matter of organizing an association of men engaged in business comes up, one of the first points of consideration is naturally that of finances, and right here is where many of them stumble.

One part of the promoters put forth the argument that the initiation fee and dues should be low enough to allow even "the small fellows" whose business is below the average to come in, maintaining that this class of men are just the ones who need the organization, and that they are also the ones who cause the biggest trouble by their lack of business knowledge.

Others maintain with just as much force that if the small initiation fee and small membership dues are to be the main points of argument on this class of men it will fail in its purpose, and that no great number of "these little fellows" will come in simply because it is "cheap."

We are inclined to agree with those who stand for the greater payment, and for this reason:

We know of no organization of business men which amounts to a great deal, so far as influence in its field goes, that does not have some executive employee who gives his time, either altogether or in part, to the work of the organization in two ways:

First, to bring the membership up to a number which by its very size emphasizes the fact that the organization is a power.

Second, to so weld the membership into a real organization that real benefits will come to each and every member, in the matter of better conditions, such as a breaking down of unfair competition, or of competition caused by ignorance of fundamental cost principles, correction of possible abuses with relation to securing of supplies or material by fly-by-nights, etc.

The employment of such a man means that provision must be made for paying a fair salary for his services and office expenses, and this means that several thousand dollars must be raised by membership dues. The initiation fee, of course, will help, but whatever that amount is, it comes only once.

No trade organization will ever bring to its membership the full quota of its possibilities in benefit to individual members unless it is financed in such a manner as to have a very large share of the real work done by somebody who by experience and training is qualified to do that work.

The individual members, of course, can and will help, but how many members of your own trade organization in your town can you name who would be willing and able to spend the time to do the work that must be done in order to accomplish the full measure of success?

But, properly financed and with the right man as executive, the association is bound to succeed.

Barry Does Not Agree with Sedgwick on Turton's Pipeless Furnace Problem.

Estate Furnaceman Advocates Separate Cold Air Return Ducts and Registers.

THAT problem of George W. Turton's certainly has produced a lot of thinking among installers. Here it is the middle of June, six months since his proposition was presented on pages 91 and 92 of our 1922 Warm Air Furnace Special, and yet they come forward with solutions.

The latest one was received from F. W. Barry, Manager of the Furnace Department of the Estate Stove Company, Hamilton, Ohio, as follows:

To AMERICAN ARTISAN:

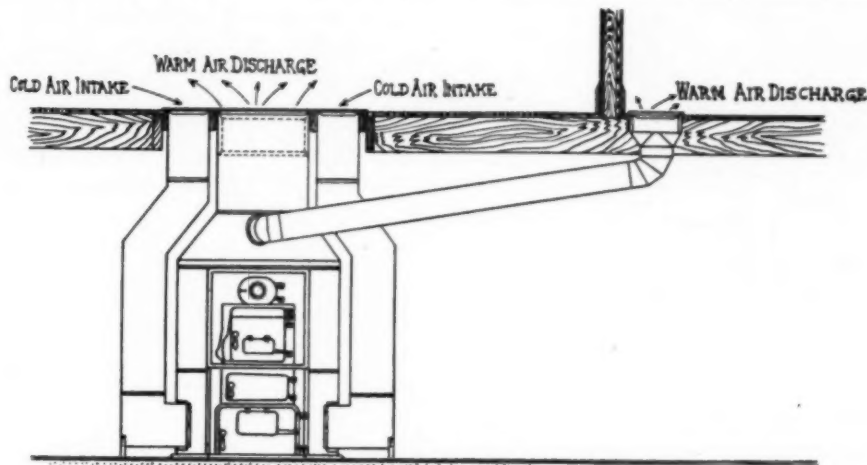
We have mailed you today the two zinc etchings and a half tone cut, as per your request of June 8. We shall ask that you kindly return these after they have served their purpose.

Since reading over my letter to you of June 6, thought best to re-write same and the following is my suggestion as to the copy to be used in this particular article. I should undoubtedly want to obtain some extra copies of the issue containing this article and should suggest that

me a copy of your May 26 issue showing a layout suggested by F. G. Sedgwick.

I believe that it would be of interest to other readers if Mr. Sedg-

furnace and all connections, of course, would depend upon the size of the building to be heated. Assuming that the sketch submitted was drawn to an eighth of an inch scale, I find that the building would be 25 feet by 28 feet. If this is correct, I would suggest a heater with 24-inch fire pot. The one I have in mind is the No. 6124 Estate Single Register Heater made by The Estate Stove Company, Hamilton,

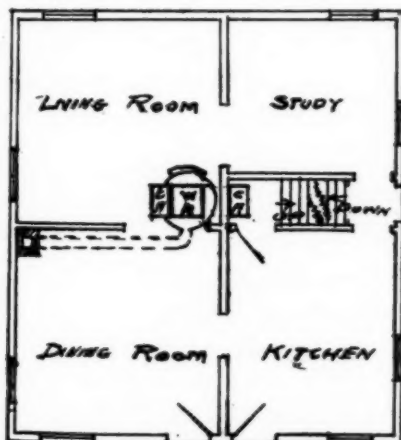


Special Warm Air Connection to Bath or Other Isolated Room.

wick would explain how he is going to comply with the requirements as of this building with a Single Register Heater, which has one main warm air connection directly over the furnace and two separate cold air intake pipes. The size of the

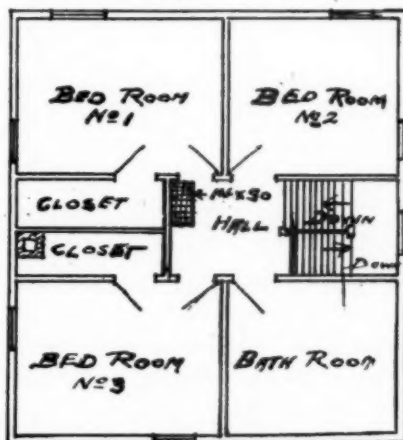
Ohio. This heater is of the standard type with cast iron return flue radiator.

I would suggest placing the warm air register in the living room with one cold air intake register directly adjoining, and in order to eliminate the objectionable cold air drafts caused by the air returning to the furnace from the second floor, should suggest reversing one of the cold air ducts like the one shown in Figure 3. With this cold air register placed at the foot of the second floor stairway, the air returning from the upper floor can enter the furnace without having to leave the lower stair door open so that the air can pass through the kitchen and dining room to reach the return section of a duplex register. To my mind this is a very decided advantage.



Floor Plan of Pipeless Furnace.

Installation Suggested by F. W. Barry, Hamilton, Ohio.



you arrange to send us fifty additional copies.

"I have been much interested in the discussion started by our mutual friend, George W. Turton, for a pipeless heating layout for a sketch that he submitted. I have before

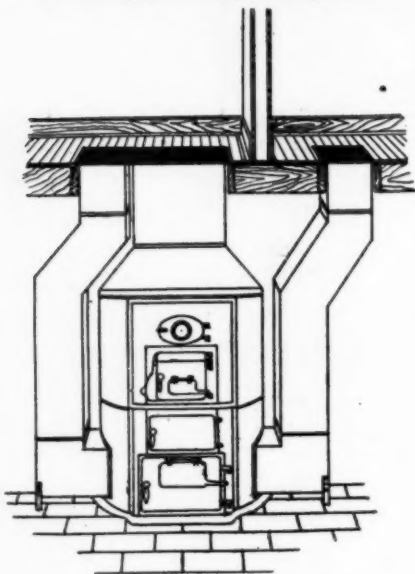
laid down by Mr. Turton; namely, that the second floor be heated to a temperature of 65 degrees, with the exception of the bath room—this room to be heated to 85 degrees.

In Figure 1 is shown the writer's suggestion for the heating

For the heating of the bed rooms and hall on the upper floor, would suggest a 12 or 14x30 adjustable ceiling ventilator with a valve register in the upper floor. By having valves in this large ceiling ventilator, the warm air supply to the upper

floor can be controlled according to requirements.

In order to maintain a temperature of 85 degrees in the bath room, I would suggest a separate warm air



One Intake Reversed.

connection direct from the furnace to this bath room, using a 9-inch or 10-inch basement connection and No. 8 or No. 9 wall pipe. Figure 2 shows the relative position of the separate warm air connection to the heater.

In order to obtain good results from separate connections with this type of Single Register Heater, a special damper is required for the large warm air connection directly over the furnace. For this purpose a special four piece adjustable damper is used. This damper can



Showing Four Piece Adjustable Damper.

be adjusted to any angle so that the proper pressure underneath is produced to force the air through the separate warm air connection. This damper is so constructed that the

air delivery to the main warm air register can never be entirely cut off. The dotted lines shown in the warm air connection directly under the register in the cut, showing the separate warm air connection, indicate a double lining at the upper edge with a 1-inch dead air space and heavy asbestos paper between, making it absolutely fire proof.

With the arrangement as outlined individual control of the warm air supply to the first and second floors, as well as the bath room, is assured, which would make same a very economical installation.

Catalog No. 19, which fully describes these special features, together with others, will be mailed to anyone upon request.

FRED W. BARRY,
Heating Engineer,
The Estate Stove Company.
Hamilton, O., June 19, 1923.

Charles Wilson Wants to Know How Turton Would Handle Pipeless Job.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Mr. Harrison's article in AMERICAN ARTISAN for June 16 regarding Mr. Turton's pipeless problem prompted me to say that I too am interested in knowing just how Mr. Turton would handle this job.

Then, too, I wish to thank all those who contributed to the solution of my own problem. I think any of us derive a lot of good from these discussions. I know while this job was installed and working to the buyer's entire satisfaction before the problem was sent in, yet it was interesting to see the different ways it might be done. Some of the installers who have not the experience with the pipeless, evidently, wrote me letters saying it could not be heated with a pipeless. I wish to say that I was glad to have Mr. Turton know that his plan for my job was exactly the way it was installed, as I consider him a very good authority on pipeless installations.

This job, referring to the plan, was installed with the duplex regis-

ter in living room, a separate register and pipe to dining room. The house was heated last winter with just a little more fuel than was used previously in a heating stove in dining room. The sale hinged on whether or not it could be heated with a pipeless as this customer was familiar with some pipeless installations and the economy of operation, etc.; was also familiar with some poor pipe installations that were fuel eaters, but did not heat the houses satisfactorily. So it was either a pipeless or nothing.

Everyone knows the origin of the pipeless. And yet today manufacturers of furnaces still put them on the market without knowing anything about how they are being installed. Also they are trying to market the pipeless through implement dealers, etc., expecting a man who knows nothing of air circulation, or heat units, to sell a furnace as he would a cultivator.

I contend the sooner the manufacturers insist on knowing how and where their furnaces are installed, either pipe or pipeless, "and it requires as much knowledge of air circulation, conditions with one, as it does with the other." The sooner they are going to see their business grow.

Come on with your solution Mr. Turton and many thanks are due the AMERICAN ARTISAN for the publicity it is giving these and other problems through the excellent trade journal.

CHARLES WILSON.
Monmouth, Ill., June 20.

Take a Definite Stand—Don't Be a Wobbler.

Next to being right in this world, the best of all things is to be clearly and definitely wrong, because you will come out somewhere. If you go buzzing about between right and wrong, vibrating and fluctuating, you come out nowhere; but if you are absolutely and thoroughly and persistently wrong, you must some of these days have the extreme good fortune of knocking your head against a fact, and that sets you all straight again.

Professor Rowley Makes Comparative Tests on Five Types of Roof Ventilators.

Tests Show That While Rotary Siphoning Type Is Most Efficient Stationary Ventilators Produce Good Results and, of Course, They Cost Less and Require Less Attention.

AT THE annual meeting of the American Society of Heating and Ventilating Engineers, F. B. Rowley, Professor of Mechanical Engineering, University of Minnesota, read the following paper on "Comparative Tests of Roof Ventilators":

Until recent years very little attention seems to have been given to the comparative efficiency of different types of roof ventilators. Recently, however, several papers have appeared in the *Journal* which seem to indicate a growing interest in this field. It may, therefore, be of interest to report the following tests which, while not covering a complete range of ventilators, represent five distinct types, and these tests are therefore submitted as an addi-

ished, indicating that the proper dimensions had been selected in the original design. It appeared also that this dimension had been se-

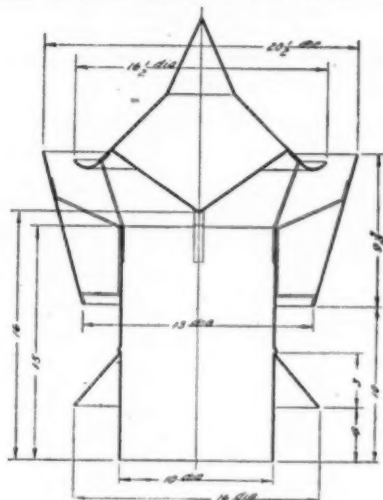


Figure 2.

lected more by accident than by scientific determination.

The ventilators were all 10 inches in diameter and were mounted as shown in Figure 11, which shows the general arrangement of the ventilator set up, together with the fan for producing the air velocity around the ventilator head. The

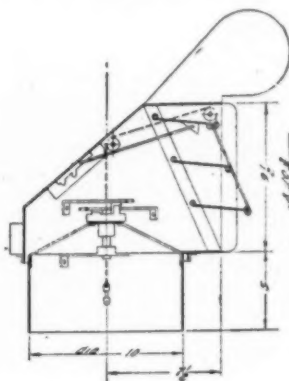


Figure 3.

wind velocity was produced by a Number 8, double-inlet Sirroco fan, discharging through a 36-inch circular duct. The ventilators were placed 3 feet 10 inches in front of the outlet and in such position that

the center line of the head was as near as possible in the center line of the duct. The ventilator pipe was supported in a frame, the bottom of

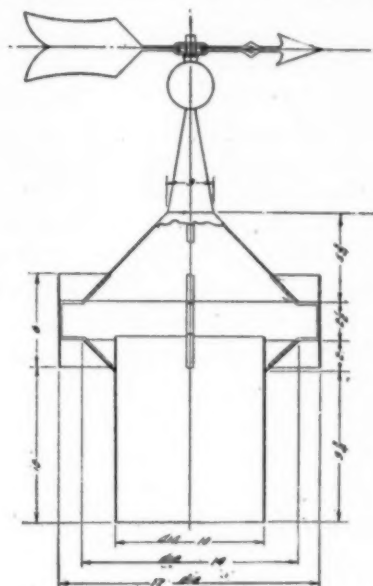


Figure 4.

the pipe being approximately 2 feet from the floor line.

The wind velocity and the air velocity created in the ventilator shaft were measured with anemometers. In order to determine the wind velocity the ventilator pipe was removed and the wind velocity in the plane of the ventilator taken at five different points as shown in Figure 12. The average was taken as the true wind velocity, the greatest

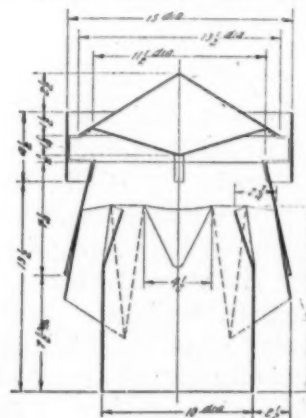


Figure 5.

variation from the average being less than 7 per cent. While this set-up may give somewhat different results than when the ventilator is placed in a wind tunnel, the results on the various ventilators will be comparative; and since the velocity

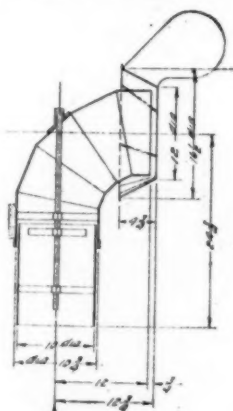


Figure 1.

tional contribution to the other data published.

The five different ventilators are illustrated in Figures 1 to 5. The detail dimensioned drawings are given because it is apparent that the dimensions have much to do with the efficiency of the ventilator. It will be interesting to note that in tests of ventilator Number 1 the dimensions were changed, first by increasing and then decreasing the opening around the outlet. It was found that when this dimension was varied in either direction, the draft created by the ventilator was dimin-

of the air over the full section of the ventilator is practically uniform, as shown by the anemometer test, it should give results which approach practical conditions.

Table 1—Tests of Roof Ventilators.

Test.	Ventilator.	Avg. wind velocity.	Avg. velocity in ventilator pipe.
1	1	453	201
2	2	452	178
3	3	451	155
4	4	447	94
5	5	455	95
6	1	835	434
7	2	816	419
8	3	813	338
9	4	815	283
10	5	830	246
11	1	1,225	702
12	2	1,272	710
13	3	1,238	539
14	4	1,255	474
15	5	1,244	417
16	1	1,593	940
17	2	1,572	919
18	3	1,573	754
19	4	1,572	650
20	5	1,549	555

The results of the tests are shown in Table 1 and in the accompanying curve sheet, Figure 13. In comparing the results of these tests with those obtained by Professors J. P. Calderwood, A. J. Mack and C. J. Bradley, of Manhattan, Kansas, it will be seen that ventilator Number 1 in these corresponds to those classified by them as the rotary siphoning type. The results obtained in both series of tests, as shown by the curves, corresponds very closely. Number 4 of this test corresponds to the plane stationary ventilator and Number 5 of the stationary siphoning of the former tests. The results in these two cases are inverted, that is, the plane stationary giving greater efficiency in these tests, while the stationary siphoning gives the highest efficiency in the tests made at the Kansas Agricultural College. This may be accounted for by the different dimensions of the ventilators used.

Ventilator Number 2 in these tests would, no doubt, be classified in the former tests as plane stationary; yet this ventilator shows efficiencies which are very close to the best ventilators in either set of tests. The plane stationary venti-

lators in the former tests show the lowest efficiencies.

It would appear that it is impossible to take ventilators of the same class and expect uniform results, but that ventilators, even though

H. L. Dryden: The ventilator is mounted outside the tunnel, just in front the mouth of it, so there is no stack pressure in the system there. Certain of the tests have been made inside, as in that way you get an

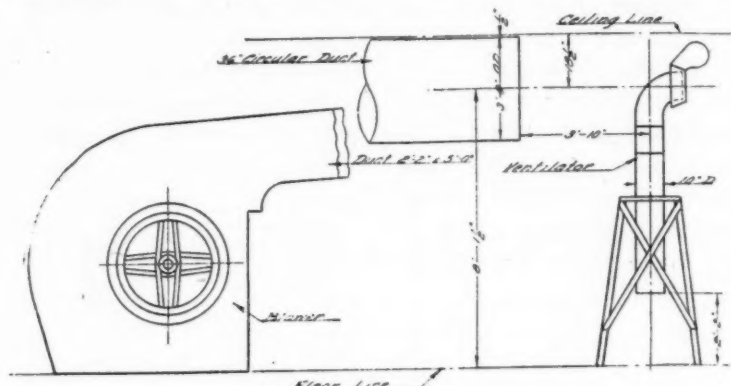


FIG. 11. VENTILATOR MOUNTED FOR TEST

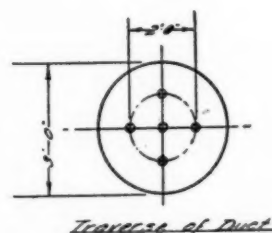


FIG. 12. TRAVERSE OF DUCT SHOWING ANEMOMETER READINGS

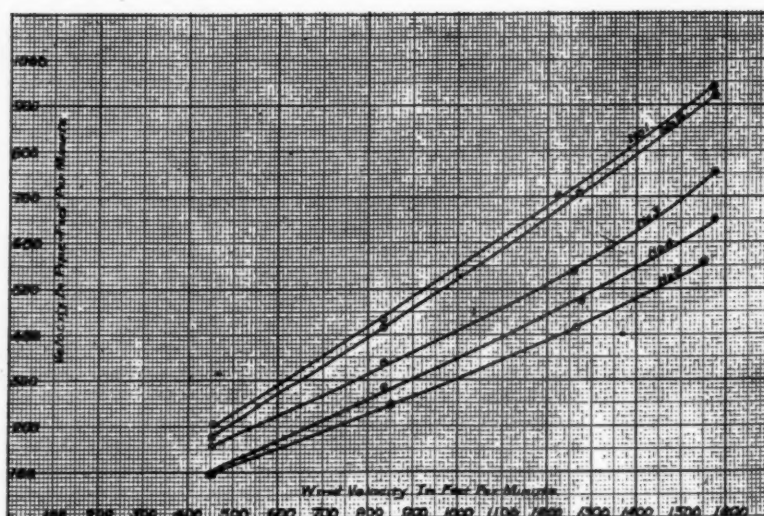


FIG. 13. HART OF RESULTS OF ROOF VENTILATOR TESTS

similar, and classified as the same, will give entirely different results, depending upon the dimensions and proportions.

J. W. H. Myrick: Would it be practical or better form to have an exhaust fan to free the air as drawn through the top?

additional pressure in the system inside the intake. In this case the ventilators were outside of the tunnel in front of the mouth of it.

Thornton Lewis: Would discharging the air right into the room where the ventilator was, have any effect? Would it not be better if

that pipe was connected to another room which is not in any way subject to pressure created by the fan forcing air into the tunnel?

H. L. Dryden: The velocity of

the wind in the immediate neighborhood of the pipe line is very minute. The discharge is also very small compared to the velocity of the wind.

Boing Makes Good Use of His Long Record of Good Work to Build New Business.

Massillon, Ohio, Furnace Installer Goes After Installation Work with Advertising and Personal Salesmanship.

TWENTY-TWO years in business ought to be a foundation on which an effective advertising and sales campaign can be built.

And in the case of William Boing it is being done with success.

Mr. Boing established himself as a sheet metal contractor and warm air furnace installer in Massillon, Ohio, in the year of 1901 and has built up a business that includes the sale and installation of more than seventy-five warm air furnaces in a year—a business in itself.

Note his advertisement reproduced in the accompanying illustration, reduced from 2 columns by 10 inches. It is a good sample of the class of advertising that builds up profitable business.

Mr. Boing believes thoroughly in the furnace that he sells. That is one reason why he sells so many.

He invites people to come in and talk it over with him before they buy a furnace, but we venture the assertion that he does not wait for a prospect to come to his store, but that he calls on the prospect as soon as he hears that the latter is considering the purchase of a furnace.

And furthermore, we venture the assertion that Mr. Boing does not wait for somebody to give him that information, but that he has a man or two on the job to locate prospects.

Incidentally, we are told that Mr. Boing possesses the pleasing faculty of being able to get his money when he has finished an installation.

That is what makes a furnace business good.

First, locate your prospect.

Second, convince him by your

record that you do good installation work.

Third, sell him on the quality and service basis.

SUCCESS SERVICE
22 Years of
Successful Business

For 22 years we have given the people of this community the very best service in
FURNACE INSTALLATION, SPOUTING AND
GENERAL SHEET METAL WORK



We sell the above Success Furnace, which in our years of experience has proven to be the best and most economical furnace on the market. It is absolutely gas and smoke tight.

Let Us Install One For You
Or at least see us before you purchase a furnace

WM. BOING
208 South Wechter St. Bell Phone 270-W

Two-Column Advertisement That Contains Strong Selling Features.

Fourth, install the furnace properly.

Fifth, collect your money without long period of waiting.

A successful man is one who can make money faster than other men can take it away from him.

Much Helpful Information in Homer Furnace Catalogue and Other Booklets.

The main catalogue, illustrating the Homer Original Patented Pipeless Furnaces, consists of forty-six pages of a good quality of paper exclusive of the covers, the latter being in brown with gold lettering.

The illustrations and general typography of the catalogue are particularly well worked out in a commendable fashion. The explanatory matter is untechnical and easily understandable.

Particularly commendable is the thoroughness with which the illustrations describe the location of the furnace in the basement and the ducts which carry the warm and cold air to and from the rooms of the dwelling.

This catalogue does not confine itself to the explanation of the pipeless furnace, but also takes up in a logical sequence the various dampers, offset extensions, the engineering service, ceiling registers, hot water heaters, pipe furnace fittings, registers for pipe furnaces, etc., together with price lists and the current installer discounts.

Supplementing the main catalogue are several smaller pamphlets and booklets, each dealing with some phase of the pipeless furnace and its utility and operation.

The group contains much enlightening information on the pipeless furnace and its usefulness. The main catalogue also contains a sepia brown photograph of S. D. Strong, the inventor of the first pipeless furnace.

For further information write to Homer Furnace Company, Coldwater, Michigan.

Do you sell incubators? Do you keep a record of your incubator customers? If he was in the market for an incubator yesterday, it won't be more than three weeks from yesterday before he'll be a live prospect to see about a brooder, drinking fountain, etc. It only takes a jiffy to write down a date and phone number.

Californian Asks For Layout of Spiral Conveyor and How to Know Where Bottom Requires Hammering to Remove Twist.

Working Drawing and Description Answers Above Question, Recommends First Drawing a Half Plan.

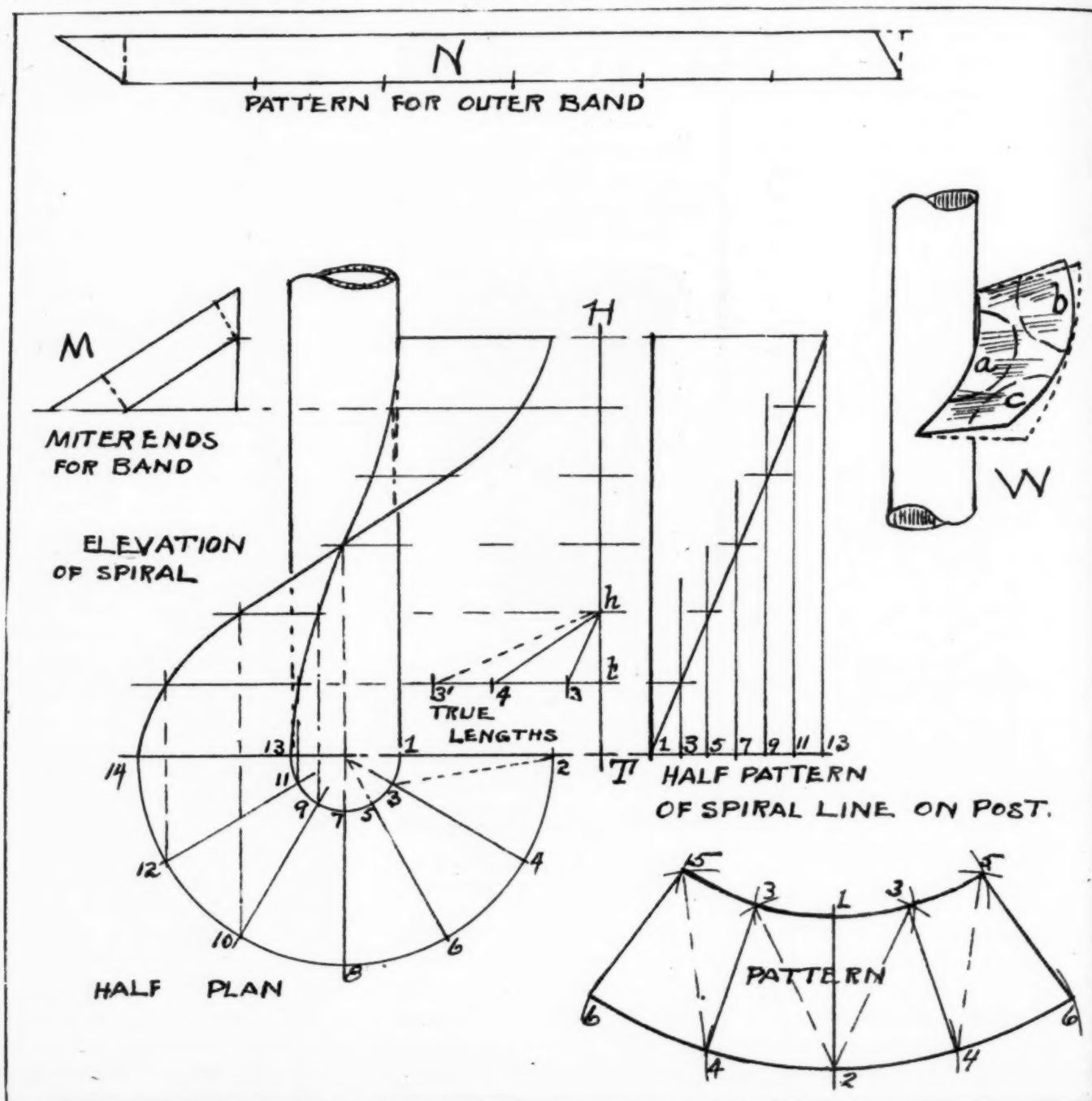
Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

A CORRESPONDENT out in California asks about the layout for a spiral conveyor, and in particular how to know where the

bottom requires hammering, in order to remove the twist which develops in the spiral revolution.

To set out the layout for the con-

veyor, first draw a half plan, making the stand pipe or shaft 1-13 inch in diameter and the conveyor, which spirals around it, has an ex-



Working Drawing Shows Plan for Layout of Spiral Conveyor.

ternal diameter of 2-14. Strike these two semi-circles and divide the outer semi-circle in equal parts. Draw lines to the center and this also divides the inner semi-circle. Now draw a line, as H-T, to equal one-half revolution of conveyor spiral. In this case it is made equal to the great diameter, 2-14, and is set as H-T. Divide this distance in the same number of equal parts as planned. In practice the elevation of spiral is not necessary to develop, since only the heights of one space is desired as h-t for getting the two lengths. But to construct the spiral square over horizontal lines, from each point in line H-T and then erect lines from each point in both semi-circles of plan. Pick out the intersections and sketch a uniform line through these points, and that gives the spiral as shown.

Now observe this spiral raises one space in elevation between each two points in plan. In other words, in the distance 2-4 of plan, we raise equal to the space h-t. In the same way in the space 1-3 of plan, we raise an equal distance h-t. So we pick these spaces as 2-4 and 1-3 and set them as t-4; t-3 in true lengths. Draw lines to point "h" and you have the true girth along the edges of spiral. Now the lines 1-2, 3-4, 5-6, etc., of the plan are true lengths, as they are true horizontal distances and have no inclination. But the dotted line 2-3 of plan raises equal to one space. So we pick this line and set as t-3' and line 3'-h is the true length. To set out the pattern for spiral line on post or stand pipe, observe from the half pattern, a straight line is developed, and the girth between points is the same as h-3. But for the pattern of the bottom draw a line as 1-2 equal to 1-2 of plan. Then pick girth space h-3 and from 1 in pattern strike arcs as at 3-3. In the same way pick girth space h-4 and from 2 in pattern strike arcs as at 4-4. Then with true lengths h-3' and 2-in pattern as center, cross arcs in point 3-3. Next pick line 1-2 from plan and, using 3 in pattern as center, cross arcs in point 4.

This development is continued,

laying out the gore pieces to about two to three feet in length, because that is about all that can be handled in shaping up for assembling, as there is a twist developed in this pattern a similar as shown by the sketch W in the full position. Now for this to fit in a horizontal position, the corners b and c must be hammered to take on the shape of the dotted position. The throat as at "a" also requires some hammering to shape the bottom uniformly. Just how much and where the workman must apply the hammer is a matter that experience alone can dictate. Possibly a coppersmith is more apt at this hammering than the average sheet metal worker, because it is his business to know where and how to hit the metal, in order to shape it.

The outer band is merely a straight strip of metal, as at N, with girth spaces set off equal to h-4 to take in the full length of the sheet. Then the miter ends are cut on, developing them as at M. The lower base cut is for the bottom and the upper cut is for a vertical splice if one is needed. Otherwise just straight cross laps are sufficient and enough strips are filled in to make the band continuous from bottom to top.

Membership of Copper & Brass Association Increased.

The Copper & Brass Research Association has just added to its membership the Engels Copper Mining Company, Gransby Consolidated Mining, Smelting & Power Company, Dallas Brass & Copper Company, Merchant & Evans Company, T. E. Conklin Brass & Copper Company, J. M. & L. A. Osborn Company, and Richards & Company, Ltd., the present membership of the Association being comprised of twenty-six copper mining companies and fifteen copper and brass fabricating and distributing companies.

Definite information has just been received here by the American Association of the formation in England of a similar organization, the Copper and Brass Extended Uses Council, comprising manufacturers

of copper and brass sheet, tube, wire, etc., with headquarters in Birmingham.

The English Association states that it is about to collect facts and figures with which to inform the public regarding the advantages of copper and brass for various purposes for which at present other metals or materials are being used.

"It has been felt among the members of these trades," says a communication just received from the Extended Uses Council, "that not only were copper and brass being overlooked for many purposes for which they are suited and advantageous, but that, in the last few years they have been displaced for many purposes by other metals on the score of cheaper first cost. It has been thought therefore desirable to investigate the purposes for which copper and brass can be used to advantage with a view to getting scientific facts which can be used in informing the public."

The first research is planned in building construction, where the field for copper and brass pipe will be investigated. Further studies will be made concerning the use of copper for leaders and gutters. English architects have already been approached on the subject, and they express the belief that the metal will assist in the color schemes of buildings, as well as in resisting corrosion from weather conditions.

Says AMERICAN ARTISAN Is Best of Many Business Papers He Receives and Reads.

TO AMERICAN ARTISAN:

I consider your paper the best of the many I receive, and I cannot see how a man in the sheet metal or furnace business can get along without it, as frequently one single item learned from AMERICAN ARTISAN is worth many times the price of one year's subscription.

Enclosed please find check for another year.

Yours truly,

GEORGE GEUSS.

Edina, Missouri, June 16, 1923.

Doyle Says Start the New Half Year Right by Installing Proper Accounting and Cost Records.

Doyle Simple Accounting System Offers Strong Appeal to Contractors Whose Business Does Not Warrant Extra Work of Double Entry.

JULY 1 is almost upon us. It marks the beginning of the last half of 1923. Very few sheet metal contractors realize that this is just as good a time to install proper accounting and cost records as January 1.

This installation means that half of the year's business will be properly recorded and at the end of the year average figures will be available to enable the contractor to determine whether or not he has been doing work at a profit. The work of preparing the annual income tax return will be lightened proportionately.

To many contractors the task of installing an accounting system presents a great many difficulties. These are more fancied than real. The principal difficulty confronting the average contractor is the matter of taking stock. If necessary this can be dispensed with and the amount of stock on hand estimated. While this is not desirable, yet many times work is in such shape that the time cannot be spared to inventory the stock. In such cases a careful estimate of the amount of stock on hand can be made and this amount adjusted at the next stock-taking time.

Single Entry Bookkeeping.

While double entry bookkeeping is recommended as the most accurate and satisfactory, yet there are contractors who feel that their business does not warrant the trouble and extra work involved in double entry. To these the *Doyle Simple Accounting System* offers a strong appeal. Where desired it can be operated on single entry plan, having at the same time many of the safeguards of double entry.

In operating on a single entry basis the general ledger is dispensed with, likewise the monthly trial balance. This leaves only the ledger containing the customers' accounts

and one with accounts payable (purchase accounts).

In previous articles describing the sales journal and cash journal we stressed the necessity of proving the work on these two sheets by seeing that the sum of the totals of all debit columns was equal to the sum of all credit columns. This applies with equal force when operating on the single entry plan. It gives a proof of 90 per cent of the month's work. After completing the entries on the sales and cash journal sheets and applying the proof just mentioned, the only remaining work to be done is to list the monthly totals on a separate set of sheets of each form (sales and cash journal).

Under "Name and Address" and "Explanations" write the names of the months, one on each line. Begin with the month the system was started. Each month carry forward to these sheets the total of each column for the month. At the end of the year add up these monthly totals and you have the figures for the year. Simple, isn't it?

Opening the Single Entry Set.

Figures covering the following items are to be carried into the monthly totals on the first line:

Cash on hand and in bank.

Customers' accounts total.

Material on hand (estimated if desired).

Material and labor in unfinished jobs (estimated).

Accounts payable total.

Cash on Hand and in Bank.

Add together the bank balance and the amount of cash on hand in the office and carry the total into the "Cash Received" column of the cash journal. Each month subtract the sum of the totals "Checks" and "Currency Spent" columns from the total of "Cash Received" column. The difference should equal the bank balance and cash in office.

Customers' Accounts Total.

Make up a list of all accounts owing to you on the day of opening the system. Carry this total into one of the blank columns under "Customers' Accounts" on the sales journal. No other amounts should be entered in this column. Each month add together the totals of "Jobbing," "Contracts" and "Store Sales" columns on the sales journal. From this subtract the total of "Customers' Accounts" column on the cash journal. The difference should equal the total of all customers' accounts owing at that time.

Material on Hand.

Material in Unfinished Jobs.

Enter the total of these two items in the "Material" column on the cash journal. At the end of each month the difference between the total of "Material" column on the cash journal and total of the same column on the sales journal will represent the approximate cost of material on hand and in unfinished jobs.

Labor in Unfinished Jobs.

Enter this amount in "Productive Labor" column on cash journal. The difference between the totals of these columns on the cash and sales journal will represent the amount of labor in unfinished jobs.

Accounts Payable Total.

Make a list of all accounts you owe on the day of opening the books. Be careful to see that all accounts are included. Statements from your creditors will give you this information. Enter this total in "Accounts Payable" credit column on the cash journal. The difference between the totals of these two columns (debit and credit) each month should equal the total of all accounts you owe.

It will be seen from this that the information essential to even the smallest contractor can be obtained every month by a small effort. No knowledge of bookkeeping principles is required; simply put the items in the columns as headed and add up the amounts at the end of the month. Carry the monthly totals forward to their respective columns in the monthly sheet and

at the end of the year the totals of these columns will give you the figures for the year. Preparing your income tax return is then but the matter of a few minutes' work.

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Final Program Announced for Michigan Sheet Metal Outing at Gull Lake, June 29 and 30.

The following is the program for the Eighth Annual Outing of the Michigan Sheet Metal & Roofing Contractors' Association, to be held at Gull Lake, June 29 and 30:

Friday forenoon, June 29, registration.

Friday afternoon, 2:00 p. m., baseball game between Detroit and a team selected from Saginaw, Flint, Bay City and Lansing. The latter team will be captained by William Schweitzer, Flint. The Detroit team will be captained by Hugo Hess.

3:30 p. m.—Free dancing.

Friday evening, 8:30, more dancing.

Saturday morning, June 30, 9:00 a. m., baseball game. A team selected from Grand Rapids, Kalamazoo, Battle Creek and Jackson will play the winners of the first game for the state loving cup. James Shouldice, Battle Creek, will pilot the team from the western Michigan cities.

Saturday afternoon, 1:30, entertainment given by members of the Travelers' Auxiliary.

3:00 p. m.—Water sports; ladies' fancy diving, men's fancy diving, tub race, ladies' canoe race, men's canoe race, ladies' boat race, men's boat race, ladies' swimming race, men's swimming race, tug of war.

Prizes will be given to winners of all events.

Following the water sports, the drawing contest for ladies will be held. Many splendid prizes will be distributed.

A suitable prize will be given to the maker of the first home run.

Prizes will also be awarded to the man and lady attending from the farthest point.

The committees for the outing are made up as follows, and you can judge for yourself, you're sure in for some fun:

General Chairman, Homer Brundage.

General Entertainment, John Meulenberg, William U. Metzger, Guy E. Fitzgerald.

Water Sports, William Lusk, John Meulenberg, N. L. Pierson, Jr., Pete Jones.

Prizes, William U. Metzger, Ira Miller.

Baseball, J. A. Shouldice, Markham Fitzgerald.

Judges, Antone Meulenberg, Lou Shouldice, W. E. Dunbar.

Officer of the Day, John Darlington. Mr. Darlington is well chosen for the job, so you had better have a care how you conduct yourselves, but be sure and present yourself for the fun.

Fred L. Barnum Speaks Before Jackson, Michigan Sheet Metal Contractors June 13th.

The Wednesday evening, June 13, meeting of the Jackson Sheet Metal Contractors' Association was made especially interesting by a talk given by Fred L. Barnum, sheet metal instructor at the East Intermediate School of that city. He gave a general review of the progress made in his department, which has covered a period of two and one-half years. He stated that sheet metal seemed to appeal more to the boys than other manual arts, because of the fact that it was creative and diversified.

His students, especially the brighter ones, are keen for knowledge of business and are regular readers of the trade papers. Many patterns are taken from these papers and worked upon in the school.

Mr. Barnum presented a complete course of study to be followed by sheet metal schools, which was indorsed by the Jackson Association. It will also be presented to the state association for indorsement. (A copy of this course will be furnished the readers of the trade papers as soon as it has been

put in order.) This course will be given to the State Board of Education for use of other schools.

To assist in continuing the interest of the more advanced students in the Jackson schools, the local association members are going to hire ten of these boys for the summer. By giving these boys work during the summer it is hoped that they will be better able to realize the practical side of sheet metal work, and thereby be more interested when they go back to school in the fall.

Mr. Barnum is deserving a great deal of credit for his untiring efforts to make sheet metal training a success in the Jackson schools.

Whitney Metal Tool Company Will Have Exhibit at St. Louis Convention.

The Whitney Metal Tool Company, Rockford, Illinois, will have an interesting exhibit of various tools for sheet metal shops, such as Tinnings' Hollow Punch Sets, Bending Fixtures, Eyelet Punch Sets, etc., at the Statler Hotel during the National Convention of Sheet Metal Contractors in St. Louis, the week of June 25th.

A special feature of this exhibit will be a guessing contest in which all visitors to the booth may take part. A large urn will be filled with tinnings' rivets of various sizes. The one who comes the nearest in his estimate to the actual number of rivets will receive a Number 10 ball bearing punch; the second nearest, a Number 7; the third a Number 5; the fourth a Number 1 hollow punch set. The one guessing farthest from the correct number will receive a Number 6 eyelet punch.

William E. Manning, Well Known Steel Man, Dies.

William E. Manning, Vice-president in charge of sales for the Youngstown Sheet & Tube Company, died June 15th, at Youngstown hospital following an operation. He was stricken while on a recent business trip to New York by a recurrence of a malady from

which he suffered about a year ago but from which he apparently had recovered. He failed to rally from the operation.

Mr. Manning was one of the best known of the younger generation of Mahoning valley iron and steel trade leaders. He was born in Youngstown on March 14, 1870. When he was graduated from high school in the class of 1888, Mr. Manning entered the employ of the Brown-Bonnell Iron Company, and when the Republic Iron & Steel Company absorbed the Brown-Bonnell works, he was put in charge of the order department by James A. Campbell, then district manager for Republic.

When the Youngstown Iron, Sheet & Tube Company, as it then was known, was formed by Mr. Campbell and the late Colonel George D. Wick in 1900, Mr. Manning entered its service as assistant to the manager of sales. His executive ability, as well as his practical knowledge of sales matters, gained for him rapid success. In 1913, he was chosen Secretary of the Company and in 1917, was elected a Vice-president in charge of sales. He also was president of the Continental Supply Company and of the Youngstown Steel Products Company, both subsidiaries of the Sheet & Tube Company.

Funeral services were held June 18th. James A. Campbell, president of the Youngstown Sheet & Tube Company, after expressing his deep sorrow over the death of Mr. Manning paid him this tribute:

"I always had implicit confidence in his judgment and integrity, not only with reference to sales policies but in other things. His position gave him unusual opportunity to understand the market and the special needs of our customers, and brought him into close touch with our operating department, enabling him to render great assistance to that department in the shaping of operating policies and plans. The success of our company has not been due to any single man, but to the loyal coöperation of many, and no one had more to do with it than Mr. Manning."

Watch!

FOR American Artisan and Hardware Record for June 30th.

This issue will contain a complete report of the convention of the National Association of Sheet Metal Contractors, to be held in St. Louis, June 25 to 29.

By all means be present at the convention if at all possible! But if it is impossible for you to make the trip, get the facts about the convention activities from your American Artisan for June 30.

Correction Is Made of Error in Prices Quoted on Torrid Blow Torches and Furnaces.

Through an error on the part of our copy department, a serious mistake occurred in our "Current Hardware & Metal Prices," in quoting prices on "Torrid" blow torches and furnaces, made by George W. Diener Manufacturing Company.

The correct prices to "dealers" are as follows:

Number 02, Gasoline Torch, 1 quart, \$5.55.

Number 0250, Gasoline or Kerosene Torch, 1 quart, \$7.50.

Number 10, Square Tank Furnace, 1 gallon, \$12.60.

Number 15, Round Tank Furnace, 1 gallon, \$12.00.

Number 21, Gas Soldering Furnace, \$3.60.

Number 110, Automatic Gas Soldering Furnace, \$10.50.

Equipment Supply Company Is First Associate Member of United Sheet Metal Contractors.

The distinction of being the first associate member of the United Sheet Metal Contractors of Chicago, which has recently been organized, largely through the efforts of Martin Gold of the Abbey Sheet Metal Works, belongs to the Equipment Supply Company, 328 Federal Street.

The following letter is self-explanatory:

A. G. PEDERSON, TREASURER, United Sheet Metal Contractors. The writer was talking with Mr. Martin Gold regarding the United Sheet Metal Contractors of Chicago. We certainly think this is a mighty fine idea and a big step ahead for the metal men of this city.

For that reason, we are very much pleased to enclose our check for \$10.00, in payment of associate membership in this association. We sincerely hope that this movement will be the big success that it should be and, as stated to Mr. Gold, the Equipment Supply Company is with it, heart and soul.

Respectfully yours,
EQUIPMENT SUPPLY COMPANY.
L. T. Mueller, Manager.

Notes and Queries

Jeweler's Blow Pipe.

From C. R. Gleich, Nokomis, Illinois.

Who makes a blow pipe similar to a jeweler's, that works from compressed air and gasoline.

Ans.—Otto Bernz Company, Newark, New Jersey, and Metal Specialties Manufacturing Company, 338 North Kedzie Avenue, Chicago, Illinois.

Patterns for Ford Speedster Bodies.

From G. F. Chapman, 173 "A" Street, N. E., Linton, Indiana.

Please advise me where I can secure patterns for Ford speedster bodies.

Ans.—St. Louis Technical Institute, 4543 Clayton Avenue, St. Louis, Missouri.

Oil Water Heater.

From J. G. Moericke, Bonduel, Wisconsin.

I should like to know who makes a kerosene or gasoline heater for heating water in range boiler.

Ans.—George M. Clark and Company, 179 North Michigan Avenue, Chicago, Illinois; Dangler Stove Company, Cleveland, Ohio; and New Process Stove Company, Cleveland, Ohio, all Divisions of American Stove Company, and Cleveland Metal Products Company, 7609 Platt Avenue, Cleveland, Ohio.

Distribution Main Topic of Discussion Taken Up at Annual Congress of National Retail Hardware Association, Richmond, Virginia, June 19 to 22.

Nearly 500 Hardware Manufacturers, Jobbers and Retailers Register at Meeting at Jefferson Hotel.

THE opening of the business session of the National Retail Hardware Association took place in the auditorium of the Jefferson hotel, Richmond, Virginia, at 9 A. M. Tuesday, June 19.

Nearly 500 delegates, consisting of both manufacturers and retailers registered.

The meeting was opened by the singing of "America," followed by a brief invocation by William Moore. A roll call with variations followed, the variations affording the audience much amusement. With the exception of Pennsylvania-Atlantic Seaboard Association, Michigan sent the largest representation to the convention—eighteen delegates.

The address of Charles H. Casey, president of the Retailers' Association, was read, receiving the sustained attention of the audience.

President Casey Outlines Work Accomplished During Year

A year ago I accepted, with fear and trembling, the high mark of esteem and honor you gave me, and now the time is near when I am to surrender the portfolio, which I do with regret amounting almost to sorrow.

When I say the position carried no hardships or that there was no occasion for worry, I do not mean to belittle the job or boost my own capacity for work, for the position does carry with it no small amount of responsibility and care.

The first activity of my term was on September 8 when the Secretary, the Vice-President and myself were called to Washington, D. C., in conference with the Department of Commerce on Mr. Hoover's simplification program.

We were a little discouraged at the time because of the apparent lack of interest shown by many of the manufacturers.

The Secretaries' Conference.

October 1 to 7, the privilege was afforded me to sit in conference with the state secretaries at Chicago and I was greatly impressed with the earnestness of purpose and the versatility of the men managing the state associations.

The conference was conducted by Secretary Sheets, assisted by Editor Peterson, and they held the men for two three-hour sessions for four days,

every minute of the time being filled with constructive work. Vice-President Williams attended three days of the meeting.

The Manufacturers' and Jobbers' Conventions.

At Atlantic City, the week of October 14, Mr. Sheets, Mr. Peterson, Mr. Riner and your president enjoyed the hospitality of American Hardware Manufacturers' Association, and the National Hardware Association of the United States who were holding their conventions simultaneously.



C. H. Casey.
Retiring President.

It seems to me that honest, unselfish coöperation by the manufacturer, jobber and retailer can do immeasurable good in distribution. If it were possible to go a step farther and take the consumer into our confidence and meetings, the chain would be complete, and even greater good might be accomplished.

The State Conventions.

From January 29 to February 27 it was my great pleasure to attend as many conventions in the eastern portion of the United States as time would permit.

The attendance, on the average, was possibly a little less than in former years, but the attention and concentration were the best in history. This was a result of the general tenseness of the times.

Problems of Distribution.

The never-ending talk of high cost of merchandise distribution at all conventions of business men during the past winter has not found a solution for the problem, for it is just as much of a problem now as it ever was.

Production processes have been improved time after time and then improved some more until today the cost of production is but a fraction of what it was in the early days of the country, but the cost of getting the goods from the doors of the factory to the merchant's shelves is actually higher now than it was at that time.

Wait on the traveling salesman at your earliest opportunity and do not unnecessarily waste his time, for goodness knows, there is enough waste at best.

Concentrate your buying, and do your own selling. By that I mean, put on your own demonstrations and do your own canvassing or special sales work.

It is undoubtedly true that the public demand for greater and still greater service from local merchants has sent up the cost of doing business to some extent but, in many instances, it is because of competition between retailers.

Business Conditions.

Secretary Sheets and I were present at the United States Chamber of Commerce meeting in New York City early in May. Past-president Ludlow and our New York member of the Board of Governors, Mr. Atkinson, took the time to sit in with us for the greater part of the three days. It was a big meeting about the big things of the country and the world but it was my observation that the biggest men of the land, and they were present at the meeting, are about as much at sea in regard to present conditions as we of this hardware congress.

A very great feeling of optimism seemed to pervade all the set speeches, but specific recommendations for bettering present conditions or defining satisfactorily the causes for the great disparity of value between agriculture and other industries were lacking.

The railroads need to be let alone, according to the best authorities on transportation that were present, that they may earn dividends on their stock in order to attract new capital to buy new equipment and so forth, so it does not look like lower freight rates right away.

A Personal Forecast.

As I see conditions for the present moment and for the near future, about half our members should be enjoying a splendid business. Those living in industrial centers, where manufacturing is a large factor, are the fortunate ones in these times, for labor seems to be fully employed and at good wages. Where conditions are thus, there is plenty of money, and the hardware merchant, with his ability and enterprise, can be trusted to get his share.

Those of us living in the agricultural section of the United States are not so fortunate, for as it is most generally known, (though I was surprised to find

a considerable lack of knowledge of true conditions of agriculture among the manufacturers of the East) the farmer—and he is still a very large fraction of the population of this country—is operating under very trying conditions.

Industrial occupations that require but a low grade of mechanical or technical skill, such as plasterers, brick layers and masons, are getting an annual income with practically no investment for equipment of education, greater, by many times than the average farmer with his heavy investment in equipment, real estate and buildings. An adjustment is inevitable, and it surely will come in the not distant future.

A New Business Forecast Service.

The Board of Governors, at the January meeting, authorized the establishment of a research department for gathering, studying and disseminating facts and figures particularly pertinent to the retailers' interests, and will endeavor to forecast as far as it is humanly possible, the effects they will have upon your business.

We are fortunate to have sufficient funds in our treasury with prospects of being able to continue the revenue, to attempt as huge a proposition as this will be. We are hoping to establish this on a scale that so far has not been attempted by a retailers' organization, so it should be a matter of pride with us to make it successful.

Secretary Sheets will have something to say on this, either in his report or during the convention sessions. We should like to have every delegate go home from here with a clear idea of what we are attempting to do for his benefit so that he may connect up with it at the earliest possible moment.

Mr. Casey's report met with the entire approval of his audience. It was followed by a financial report delivered by the vice-president, Hamp Williams. The name of the official paper of the association was announced to have been changed from the National Hardware Bulletin to that of the Hardware Retailer.

Report of Secretary Sheets

Recognizing distribution costs to be the outstanding problem confronting business, National Retail Hardware Association is concentrating study upon this subject.

Our purpose is not to condone shortcomings or to excuse failures chargeable to incompetency or delinquency, but to help the hardware trade, especially the retail division, by arousing it to the existing wastes and to point out remedial measures intended to effect every possible economy in the interest of the public.

Cost Of Doing Business

One approach to the problem is through thorough analysis of overhead expenses.

Such an analysis of the retail hardware industry for 1922 has recently been completed. The survey is the most comprehensive that has ever been made in our field, complete data being procured, covering 1068 hardware businesses of all sizes, in every section of the country.

It was found that operating expenses for 1922 averaged 21.56 per cent and

that the average profit on sales was 2.64 per cent.

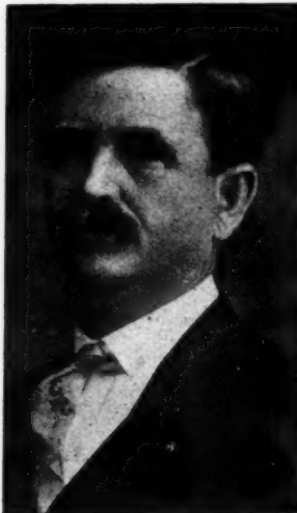
Separation of these expenses into twenty-one classifications permits careful analysis in the interest of further economy. To increase the value of the study to the individual the tabulations have been based upon geographical division, grouping of dealers according to sales volume and also according to population.

The work of getting the results of the study before members is now under way.

That the public may have a better understanding of the facts, a digest showing the profit and loss experiences of hardware retailers has been furnished to the leading newspapers of the country. This shows to the fraction of a cent the distribution of the consumer's dollar spent for hardware.

Accounting Service

During the fiscal year, 3,953 orders for accounting supplies were filled, as



Hamp Williams.
President.

compared with 3,577 during the preceding year—a gain of \$2,302 in sales volume.

The records show 658 new users of the National Retail Hardware Association customers' ledger and combination record, the two cardinal forms of our system. Several hundred new users of National Retail Hardware Association inventory sheets and other forms are also noted.

The adaptability of the records to any size business, is shown by their successful use in a chain of fifteen stores in Oklahoma, a chain of ten in New York and by a number of smaller chains.

Store Planning Service

Assistance in store planning was rendered to more than five hundred members in thirty-seven states, ninety per cent of the number being for remodeling purposes.

This assistance consists of furnishing standard plans for store dimensions and stock approximately the situation for which help is requested, or working out special plans based upon detailed information furnished by the applicant. All plans are complete with details of fixtures, windows, display and decoration schemes.

Field Work

The National continues to co-operate in every feasible way with the affiliated state organizations. Assistance consists chiefly of furnishing equipment for use by state field men and training men for such work.

Information Service

In line with action taken in the secretaries' conference last fall, the Information Service has undertaken to assist secretaries to enlarge their information files in order that more inquiries may be answered directly by the state offices, saving time for members and tying them more closely to their state organizations.

Lists of other trade names will be supplied as fast as they can be prepared. These include enamelware, washing machines, sewing machines, food choppers, and oil stoves, totaling more than 11,000 names.

The Information Service answered more than 2,500 special inquiries during the year.

Sixty-four special investigations were made, ranging from silverware redemption bureaus, and stock food and phonograph contracts to land values along the Rio Grande river, and opportunities in California.

Sales Promotion Service

Four hundred and forty-six dealers received advertising assistance from this department, including helps for newspapers, store papers, window display, circular letters, mailing lists, circulars, catalogs, special events, such as anniversary sales and openings, special campaigns, salesmanship, community development, movie slides, special designs for letterheads and signature cuts, plans for dollar-days and other community sales, floats, stunts copy layout and printing.

In addition, 204 dealers have been furnished complete plans, including copy, layout, cuts and stunt plans for stock reduction sales.

Hardware Advertising Service, for newspaper use, was launched last fall. It is being used by 244 dealers who have been subscribers from one to ten months. 35,000 cuts have been sent out as part of this service.

Simplification And Standardization

As outlined in the report of the president, the efforts which the Association has made along the lines of simplification and standardization have borne fruit through the simplification of the paint industry. Progress has also been made in other hardware lines, notably saw making, and a number of hardware manufacturers are working constructively in cooperation with the United States Bureau of Standards.

Domestic

At the time of the investigation by the joint Commission of Agricultural Inquiry we had occasion to recommend to Mr. Hoover that there should be in his department a division devoted to the study of domestic commercial problems. We have actively pushed this idea since that time and therefore feel that we have had some part in the recent creation of such a division in the Department of Commerce.

The purpose is to study domestic commerce and its problems, and Irving S. Paull, who was secretary of the Joint Commission of Agricultural Inquiry

during its constructive investigation, is chief of the new division.

Legislation

The Association's legislative activity in the main has been directed coöperatively with other business organizations through the channels of the Chamber of Commerce of the United States, our attitude in many cases being determined by reference of the Chamber's referenda to our Committee of One Hundred.

This method of deciding our position and giving expression to it has proven uniformly acceptable.

We have vigorously opposed the Brookhart plan to allow government civil employees in the District of Columbia to purchase supplies from the commissary department on the same basis as the military and naval personnel.

Trade Tendencies

Retailers of hardware welcome the advanced tendency of hardware wholesalers and manufacturers to join in the study of mutual problems, the solution of which will make for more efficient and more economical distribution, directly benefiting consumers and, reflectively, all factors of the trade.

The American Hardware Manufacturers' Association at its convention last October appointed a committee on distribution to represent the manufacturing branch of our industry in the study of distribution costs. A. B. Birge, of St. Louis, chairman of that committee, is on our program for this congress.

Growing numbers of wholesalers are showing added interest in retailing problems by coöperating actively in the support of movements intended to improve distribution.

Secretaries' Conference

Twenty state secretaries, fifteen assistant secretaries, and field men, the national president and vice-president, and the headquarters staff attended the annual secretaries' conference held in Chicago the first week of October.

Inventory was taken to ascertain the progress, made in rendering the services which the 1921 conference had definitely determined as logical, and plans were laid for the extension of these services.

Subjects were selected upon which to concentrate during the winter conventions, these including: Stock turn; Jobber Competition; Information Filing; Salesmanship; Credits and Collections; Variety of lines; Sales Promotion; Simplification and Accounting.

State Conventions

The National sent one or more representatives to each state convention held during the year to render such assistance as was possible. The conventions were of uniformly high order and definitely helpful to those in attendance.

The question box, so-called, continues to be a feature of growing importance.

I am impressed that greatest possibilities for convention improvement lie in careful planning of the program for general discussion of trade subjects of major importance and I am convinced that fundamental problems of vital interest to every section can be determined for attention at all conventions and that such concentration will effect results more speedily than is possible under the plan of varying subjects in different states and thus scattering our energies.

The Board Of Governors

The Board of Governors has met three times since the Chicago conference. Between meetings the members of the Boards have been kept fully informed of Association activity and all questions involving policy have been passed on by them.

It is fitting here to comment that National headquarters now has the best personnel and most complete equipment in its history for efficiently and punctually rendering service to the membership.

The report of Secretary Herbert P. Sheets was submitted in writing and time was not taken to have it read.

The principal speaker of the morning was Isaac Black, of New Britain, president of the American



George M. Gray.
Vice-President.

Hardware Manufacturers' Association. Mr. Black offered a discussion of the broad phases of distribution from the viewpoint of the manufacturer who has had long wholesale experience and acquaintance with the problems of retailers.

"Distribution Costs from the Manufacturers' Viewpoint," As Seen By Isaac Black.

Where and by what means has the increased cost of distribution come about? In trying to make an analysis of the situation, first let us clearly understand that we are talking of the hardware distributor that we formerly knew, who confined his activities to the handling of hardware and its kindred lines, and not to the distributor of today, who is adding so many lines which formerly were foreign to the hardware industry.

I think by analyzing the situation from this viewpoint you will get a little closer analysis of some of the determining factors in the chain of distribution.

Please let it be clearly understood that my remarks are not in the nature of

criticism of either jobbers or dealers, or on account of the many lines they have added, that are now generally accepted as part of hardware distributors stock which formerly were not carried.

I do, however, want to point out many things which I think have their bearing on the present increased cost of distribution. Manufacturers of hardware have looked only to certain definite trade channels for their distribution; namely, hardware jobbers, supply houses and retail hardware dealers.

I think possibly the first foreign line was that of electrical fixtures and supplies; then plumbing goods, and a little later on furniture, rugs, draperies, phonographs, china and crockery ware, mechanical toys, and then a general line of toys other than mechanical.

With the rapid development of the automobile, automobile accessories have become an extensive part of the present hardware stock.

Radio equipment and accessories is another line which is just in its infancy and possibilities of sale, and that, too, seems to have found its channel of distribution through the hardware trade.

You say what has this to do with the increased cost of distribution? From my knowledge of hardware, consisting of thirty years of active employment in this line; as clerk, salesman, buyer, sales manager and manufacturer, I have learned that there is more detail to the hardware business than any other line of merchandise that I know anything about.

Have you Mr. Jobber and Mr. Retailer so departmentized your business according to the individual lines you carry the space these lines occupy in your store; clerk hire and managerial expense apportioned in accordance with the sale of these lines, so that you know actually what they have added to your overhead? What your investment is in dollars and cents, and the amount of turn over you get from each one of them in relation to your gross turn over and volume of business?

Salesmen Should Be Made to Understand the Line.

There is a general complaint in the hardware field today on the part of the jobbers and retailers alike, that it seems impossible to employ people who understand the line as they should.

It is natural that hardware clerks or road salesmen for a jobber from the nature of the goods themselves would have a keener interest in the selling of anything pertaining to an automobile or radio outfit, than he would for the farm equipment for a modern cattle barn; or, the detail connected with the sale of builders' hardware for a home.

I think it was in February of this year that your worthy president, Mr. Casey, told me that he had within a week of that time received a letter from a well known manufacturer of farm equipment, who formerly handled their line through jobbers and retailers, that they had found on account of the excessive cost of distribution through this channel, the necessity of going direct to the farmer or ultimate consumer of their product, finding it less costly to distribute in this manner than their former method.

I am not one of those who is looking for the elimination of the jobber, or expects to see the day when the jobber will not have his place in the chain of distribution; but his importance as a distributor of hardware depends entirely

on his ability to function 100 per cent. Likewise the retailer, who is the final link in this chain, must justify his existence on the same basis.

Raise Standard of Retailer.

The retailer must have sufficient knowledge of the lines of merchandise he attempts to carry to be able to judge for himself the quantity and quality of goods he should buy for his particular community; the assortment of stocks to be carried; the investment to be made for the possibility of sale; and the market he has at hand to justify his location in business, and I think right here one of the essential things that many merchants overlook is that of financing their own business. I mean by that, financing their business locally at their own banks in the town where their business is located.

Roger W. Babson, the eminent statistician, says, "there are too many retailers; the way to make independent retailers efficient and prosperous is not to decrease their numbers, but to raise their standard." He states that there are a billion and a half retailers in the United States today, and one hundred thousand of them are doing a profitable business; four hundred thousand more are doing a fair business, but a million of them are barely struggling along. Fortunately, I do not think that this proportion pertains to the hardware trade.

Mr. Babson further says that a large proportion of the million who are barely struggling along are actually operating at a loss, if they only knew it, and which would be disclosed if their books were kept properly; and the remainder who are not operating at a loss are merely getting day wages, and small day wages at that, who would be much better off if they were bricklayers or plasterers. That is, they would have greater compensation, or their earning capacity would be greater following these vocations, rather than continue to do business as they are doing it at present; and still the prosperity of the country is dependent on the efficiency and prosperity of its retailers. Producers of raw material are dependent on the manufacturers; the manufacturers are dependent on the jobbers, while all three groups are dependent on the retailers.

Effect of Competition on Cost of Distribution.

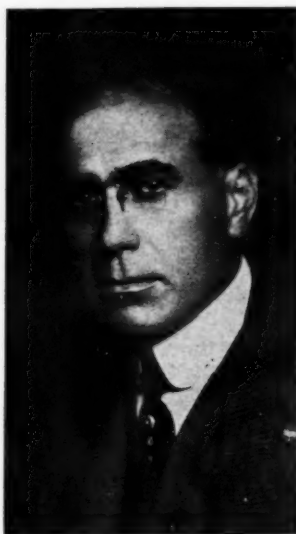
Competition in advertising is another added cost to distribution, and I call it competition because many times manufacturers, jobbers and retailers alike get into the competitive spirit of advertising; seeing how much better they can do the job than their so-called competitor, or how much more space they can buy, rather than having in mind the real message they desire to convey to their prospects, and which finally loses its value as a sales medium.

When I hear the word "competition" I cannot help but think of B. Altman, of New York, who as a young man peddled with a pack on his back, and at the time of his starting in business in a department store had something over six hundred so-called competitors; and in his short life, and at the time of his death, operated a store that was looked upon as a model of its kind; had sixty-eight hundred competitors, all of them striving to attain the standards of B. Altman in the merchandising game. He was able to leave a fortune estimated at eighty millions of dollars.

The Decimal Pricing System.

There has been a good deal of discussion recently in trade magazines and otherwise of what is known as the decimal system, and I speak of this because it has a very distinct bearing on the cost of distribution. I am neither an opponent nor an advocate of the decimal system of pricing or packing in the hardware industry, because I think it goes far beyond our line, and to be effective would have to be universally adopted; not only by the hardware industry, but by many other industries as well. However, as it relates to hardware, I do not think it is a thing which manufacturers, jobbers, or retailers as an association can take concerted action on.

If decimal pricing and packing is the economical, as well as the simplified method, for any individual manufacturer to pack and price his merchandise, it will come about in a natural way, and



Herbert P. Sheets.
Secretary-Treasurer.

without any coercion or demand for such a system. One magazine, which styles itself the national magazine of the hardware trade, has given considerable space and time to the discussion of the decimal system, and recently brought to the attention of its readers what they consider is responsible for the high cost of distribution of hardware, and giving largely as that cause the present method of packing and pricing, which article I cannot agree with as having any great bearing on distribution costs; neither am I in sympathy with the propaganda and method it urges upon dealers and jobbers in the clubbing of manufacturers to bring about a decimal system.

Much has been accomplished in the matter of standardizing merchandise, but there is much more to be done in this line. We have for the past several years in the line that I am interested in, that of builders' hardware, been making changes in our method of pricing; standardization and simplification, so that today instead of a 1,500 page catalog, we issue a 380 page catalog, of which sixty-two complete pages are priced in decimal units, covering such goods as are specified on contracts, and usually ordered in decimal units.

At the convention of the National Jobbers Association last year at Atlantic City, I believe I am correct in saying that the report of the Secretary and

Treasurer of the National Jobbers' Association indicated the jobbers' cost of doing business for the preceding year had been 20.47 per cent. Later on in an address delivered by your worthy President to the National Manufacturers' Association, he made the statement that from statistics compiled, the cost of doing business of the hardware retailer for the preceding year had been 21½ per cent; or a spread of approximately 1 per cent between the cost of a jobber doing business and that of a retailer.

These matters call for serious thought and the weeding out of unprofitable lines; the checking up on turn over possibilities, and cost of distribution.

Remember that distributing costs are not reduced by the purchase of cheap merchandise; price buying is not the panacea or cure-all for the ills of increased overhead. There is a choice and discrimination in the purchase of hardware just the same as in any other line of merchandise.

Following this talk discussion from the floor was invited and a general response was made. For the first time in the history of the two associations producers and distributors met face to face in discussing the problems in which both were involved, although at two ends of the same process.

The interest in what the speakers had to say was so great and the good old world-famous Virginian hospitality such that the attending delegates were totally oblivious to the fact that the thermometer was flirting around 95 degrees in the shade.

The meeting was adjourned until 2 o'clock when the afternoon session began.

The afternoon session of the first day was opened at 2 p. m. by an address on "Distribution Fireworks," by John M. Townley, Kansas City, Missouri, Vice-President of the National Hardware Association. This address was well received.

A discussion by the Congress followed the address of Mr. Townley.

"Some Wastes and Their Remedies" was given by R. O. Noojin, Attalla, Alabama.

C. L. Glasgow, Nashville, Michigan, spoke on "What Is Profit?" a much discussed subject which needs repetition to induce clear thinking.

Wednesday, June 20.

The first speaker of the morning session, Wednesday, June 20, was Mr. Watkins, president of the Watkins-Cottrell Company, who has occupied a prominent position in the

hardware jobbing business since his entry in 1875. Mr. Watkins addressed the convention on the subject of "Distribution Costs to Retailers Through Jobbers."

Direct sale from manufacturer to consumer means nothing more than an added burden upon the former, since additions of jobbing expenses must be added to those of production, he said. Mr. Watkins advocates standardization of lines carried as a direct preventative to unnecessary waste.

"No plan of distribution can conceivably differ in essentials from that which the world now follows," said Mr. Watkins. "All the conditions of the trade are fixed and virtually immutable and our system of today, ideally applied and carried out, would be as nearly perfect as any human contrivance may be."

Following a discussion by the Congress of the points which Mr. Watkins brought out, W. T. Pace, Franklin, Virginia, spoke on "Unproductive Service" as follows:

What W. T. Pace Thinks and Knows About "Unproductive Service."

We believe many of our merchants, in their efforts to serve the exacting demands of the general public, are loading their shelves with duplicates of many articles which add to the capital required, and produce a lack of turnover necessary to show proper returns on investment. Great care should be exercised in selecting every line of goods carried and duplication avoided whenever possible.

In our attempt to please exacting customers, we would say that many retail dealers give this particular service too great emphasis and the excessive frequent deliveries constitute an item of cost that does not bring to the dealer a just return on the outlay entailed. In large towns and cities we would advise a careful grouping of zones or wards and have stated hours for delivery in each zone or ward.

Carrying repairs is a service that is a necessity and one that is usually appreciated by the patrons of every well established retailer, but it is likely to become expensive and unprofitable if great care and good judgment are not used. We are quite certain that few dealers ever really get proper returns on their investment of time and capital employed.

When we make special orders for repairs, do we add enough margin to cover time and extra office expense, postage, express charges, etc.?

Stocking goods of infrequent sale is a very essential service, but usually quite unproductive. Goods of this nature should always bear a larger margin of profit or much loss will necessarily be sustained on account of additional capital required upon which small turnover is made.

Long credits are a most unprofitable

and unappreciated "unproductive service." Many of our dealers have been trying to indulge in this luxury and have practically attempted to do a banking business, but without using banking terms or customs. We are rendering a service, which many times not only brings us highly inadequate returns on investment, but when an attempt is made to bring our long past due debtors to a final settlement, we not infrequently make enemies of them and lose their further patronage.

The problem of efficient, intelligent, productive help is one of serious importance to the retail dealer, particularly in our stores in smaller towns and rural communities, where much valuable time of employees is wasted by thoughtless help in community gossip with acquaintances. Polite and courteous treatment is essential and patience and tact are necessary; but when customers have been properly served, further time should not be consumed in general conversation.

Use Advertising Matter Furnished by Manufacturer.

From years of personal observation we are compelled to say we believe that millions of dollars are being wasted in the use or non-use of expensive advertising matter, furnished by manufacturers and jobbers, to be used by the retail dealer. We all know that the cost of this expenditure is added to the commodity and the consumer eventually pays the cost.

Many of our dealers have metal and plumbing shops, steam fitting or agricultural implement departments, furniture, etc., and are frequently called upon to furnish estimates of cost on repairs or new construction work, to set up or install goods, or machines sold. There is much loss of time by expensive help in this department of your business if very careful attention is not given to this matter. We advise that separate accounts be kept against these departments, and care be taken to include in estimates of cost the expense of such service, otherwise this phase of your business will produce loss instead of profit.

The Service Is Unproductive Because of Lack of Volume.

Much cost may be saved by the retail dealer in many items of service by a closer study of methods used and a corresponding reduction of cost in the distribution realized. We are quite certain that the total average overhead of over 21 per cent in the distributing cost of hardware as ascertained by the survey made, is too great, and our opinion is that one of the causes for this excessive cost is that there are too many retail hardware stores in the average town and smaller cities. It is not possible for all of them to obtain volume enough to provide for overhead expense and produce a reasonable return upon capital invested, and if they all remain in the game some one must bear the cost. In the average community, the number of retail stores in operation and the capital invested are much in excess of requirements for economical distribution, and until more consideration is given by persons now in the retail business, or by those who may be contemplating entering this line of endeavor, it will simply resolve itself into a case of the "survival of the fittest."

A. S. Gronemeier, of Mt. Vernon, Indiana, who considered the mer-

chant's relation to his community and the activities essential to customers' service and business progress. His talk was directed to the reverse side of the subject treated by the previous speaker, "Productive Service."

At 12:30 o'clock machines and busses awaited the visiting ladies to conduct them to the luncheon given at 1 o'clock at the Country Club of Virginia.

The afternoon session of the second day was opened by the address of Alvin E. Dodd, Manager Domestic Distribution Department, Chamber of Commerce of the United States, Washington, D. C. Mr. Dodd spoke on "Some National Tendencies in Hardware Distribution."

Mr. Dodd's address was followed by Robert J. Murray, Honesdale, Pennsylvania, on "Business Control."

The discussion taken up by the Congress immediately after Mr. Murray's address was followed by a talk by Murray Sargent, Sargent & Company, New Haven, Connecticut, on "Decimal Pricing," as follows:

Murray Sargent on Decimal Pricing.

The significance of this meeting between the retailer and the manufacturer has already been stressed. There are, however, some items of expenses which cannot be reckoned with individually as advantageously as by coöperative action through the three groups. The distribution problem, for which we seek a solution, is to free some of the investment locked up in merchandise, so that it will be available for a quicker turnover. Whatever unnecessary expense is involved increases the cost of doing business.

Recognizing that the Decimal System is properly a part of the whole simplification, standardization and elimination of waste movement, I believe that it should have separate consideration, if only for the reason that delayed action on it might interfere in some cases with obtaining results on the larger program of simplification through elimination of waste, including cutting out of slow selling items.

Consideration Given to Packing.

In the matter of packing, however, it seems to me that a different situation presents itself and that a definite effort should be made to reach some conclusions under the heading of "Elimination of Waste." Perhaps the most important factor in determining the packing quantity of an item should be—"How often does the smaller retailer turn over this quantity of that particular item?" This is of almost equal importance to the jobber and retailer, for it can lead to

saving, first in stock investment, particularly in slow movers, and second in broken packages, which is an expense to all concerned. Consideration should be given to the size of the package to avoid one that is either too small or too bulky, to the suitability of certain quantities, and to the obviously greater expense in packing small quantities.

The future of decimal pricing depends, in the last analysis, on its ability to withstand the test of its economic soundness. Does it represent a net saving in overhead to the trade? Fortunately we can look back for many years upon the workings of decimal pricing (and packing) on numerous hardware items and we now have the experience of several manufacturers, who have been using the systems entirely, to judge by. The interest on the investment is less than the salary of a clerk.

Real Saving in Decimal Pricing.

The question naturally comes up then as to what is the real saving in decimal pricing. Whatever the nature of the material, it becomes necessary for the manufacturer to figure his costs, as well as his manufacturing records, on some one quantity basis, such as by the gross.

The manufacturer who has a comparatively simple line, by using the Decimal System in his factory organization, gets the benefit of quick figuring of operation prices which are the bases for paying piece workers, and of costs which are the bases of selling prices. If the manufacturer has a complex line on which the trade practice has been to use different units, for example, gross on some items, dozens on other items and pieces on still other items, it means not only time lost in gross and dozen figuring, but also the eventual expense of transferring some items to other units. Further than this, it becomes necessary, eventually, on practically all items, to figure the each price. The retailer, for example, even on small items, finds it necessary from time to time, to sell one piece or two pieces to his customers. It may be said that the amount of saving in this figuring from raw material to the consumer is negligible on one piece. Undoubtedly this is true, but when it comes to hundreds of thousands of different articles, the question is a different one. The net saving of time cannot, of course, be figured accurately, but when the confusion and errors, due to the various units, is considered, there can be no question of a large saving in the aggregate.

It is perhaps important for those who are interested in obtaining results in simplifying practice to realize that the progress must at times seem slow, but that the important thing is that the progress should be steady and that the opportunities for simplifying should be constantly brought before the attention of the trade generally.

There is probably no one time rather than another when changes of this character can be made to better advantage. When business is active the trade is pressed for time by many things coming up for consideration. When business is quiet, it is natural that efforts should be made to cut down expense and to postpone any changes which involve even a relatively small initial expense. Full information is available showing how the change can be made with a minimum of confusion. As already indicated, the expense is not large and once the change is made the advantages are for all time.

After Mr. Sargent's address, President Black of the American Hardware Manufacturers' Association, expressed the opinion that the time was not yet here for decimal pricing, owing to the heavy expense it would involve by the necessity for reprinting all catalogs.

Thursday's Sessions.

At the Thursday forenoon session, Major A. E. Foote, of the Division of Simplified Practice, Department of Commerce, spoke on the subject which had originally been assigned to Arthur B. Birger.

Major Foote pointed out many of the savings that had been made through the elimination of unnecessary sizes and shapes, such as in the paving brick, shoe, box making and other industries and urged that the hardware manufacturers keep up the good work started in their field.

Irving S. Paull, of the Bureau of Domestic Commerce, Department of Commerce, took the place of Congressman Sydney Anderson, who was to have spoken on "The Transportation Factor," in its relation to production cost and consumer price.

After the reports of committees had been received resolutions were adopted covering the following principles:

Approval of simplification practices as advocated by the United States Chamber of Commerce and province of assistance.

Hope for early adjustment of difference between prices received by farmer for produce and those paid by him for commodities.

Gratification for manufacturers' recognition of retailer in greater measure as important factor in distribution.

Stressing importance of increasing stock turnover and eliminating unnecessary merchandise costs.

Objection to jobbers' competing with retailers as unethical and uneconomical.

Setting of January 1, 1924, as date for change to decimal pricing system.

Greater coordination and cooperation between Boards of Governors of manufacturers, jobbers and retailers.

Use of term "Margin" instead of "profit" and figuring of margin on selling price, not on cost.

Resolutions were also passed thanking the Virginia Retail Hardware Association, the Richmond people and the Entertainment Committee for the splendid entertainment furnished.

Dr. D. S. Freeman, Editor of the *News-Leader*, the leading paper of Virginia, spoke on "Ideals and Progress."

Those who have had the privilege of listening to Dr. Freeman in the past will fully appreciate the statement that his audience at this time was held spellbound during his entire address. Although a Southerner of the South, Doctor Freeman has a broader view and a clearer vision than most of those whom we of the North are wont to class as progressive thinkers.

The election resulted as follows:

President—Hamp Williams, Hot Springs, Arkansas.

Vice-president—George M. Gray, Coshocton, Ohio.

Secretary-Treasurer—Herbert P. Sheets, Argos, Indiana.

J. Charles Ross, Kalamazoo, Michigan, and George W. Schroeder, Eau Claire, Wisconsin, take the places of George M. Gray and F. E. Strong, the holdover members of the Board of Directors being:

R. W. Hatcher, Milledgeville, Georgia; W. I. Hubbard, Scottsburg, Indiana; H. R. Beatty, Clinton, Illinois; Gus Albrecht, Jr., Louisville, Kentucky; R. J. Atkinson, Brooklyn, New York, and Arthur M. Lamson, Marlborough, Massachusetts.

The Advisory Board consists of the following ex-presidents of the Association:

Mathias Ludlow, Newark, New Jersey; E. M. Healey, Dubuque, Iowa, and C. H. Casey, Jordan, Minnesota.

San Francisco was chosen as the 1924 Convention City.

Thus came to a close what was without question the best convention and most promising in its effects that the National Retail Hardware Association has ever held.

Retail Hardware Special for Hardware Congress at Richmond, Virginia, Has Enjoyable Trip.

Party So Lively That the Fact That Weather Man Had Neglected to Turn Off the Heat Was Forgotten.

ANOTHER successfully conducted Hardware Special can be added to the Pennsylvania Railroad's probably already large list of successful specials—and to H. C. Vandervoort, who accompanied the trail all the way to Richmond, special thanks are due.

At 5:30 p. m. Saturday, June 16, about 100 delegates to the Richmond Congress boarded the train at the Union Station, Chicago. They had gathered from Illinois, Missouri, Iowa, Arkansas, Minnesota, Wisconsin and other states to ride together. The "Argos" bunch joined the party at Plymouth, in fact all the way down new recruits were added until the Michigan delegates, headed by "Charlie Ross," on their own special car were picked up at Pittsburgh.

The Michigan delegation, which is always the largest from any state, is surely "modest" and "retiring"; about the first thing they did was to march through the cars singing "Michigan."

There were few manufacturers on the Special, but when you consider that the few included such "shining lights" as J. W. Meaker, of the American Steel & Wire Company; N. A. Gladding and S. L. Webster, of E. O. Atkins & Company, and the most loyal of them all, F. S. Kretsinger of the American Fork & Hoe Company, you will admit, what they lacked in quantity they more than made up in quality.

Cigars for the men and boxes of candy for the ladies were distributed by Mr. Meaker and both Mr. Gladding and Mr. Webster supplied playing cards.

The meals were good; very little reading was done, as there was so much visiting back and forth that no one even minded the fact that the weather man had forgotten to turn off the heat. When the trip ended we hardly realized that almost 27

hours had been spent on the train.

And when at the Richmond railway station we found all of the Richmond Committee waiting for us with busses and cars to carry us to our hotels we knew that the Richmond convention would be one we would long remember as truly southern in hospitality and gracious courtesy.

Edward A. Niven Is Appointed Pittsburgh Sales Agent for American Steel & Wire Company.

Edward A. Niven, formerly manager of the merchant sales department of the American Steel & Wire Company, New York City, has been appointed sales agent in charge of the Pittsburgh sales office of the company in the Frick Building, and has taken charge of his new duties. Mr. Niven has been connected with the American Steel & Wire Company, in various capacities for over thirty years, and before entering the sales department, had practical manufacturing experience. He is a native of Pittsburgh.

Chicago Hardware Outing to Be Held July 18, at Klein's Grove.

The Chicago Retail Hardware Association will hold its "Hardware Outing" Wednesday, July 18, 1923, at Klein's Grove, Crawford and Lincoln Avenues, Chicago.

Invitations are being sent out by William Triesselmann, Secretary, Entertainment Committee, 3003 Belmont Avenue, Chicago.

Life is what we make it, not what this one or that says it ought to be. The life forces of this great Nation have been in jeopardy before now and the feeble yawns of those who find everything going to the dogs in government affairs will cut little figure in the general roundup.

Coming Conventions

Western Warm Air Furnace and Supply Association, Statler Hotel, St. Louis, Missouri, June 25, 1923. J. H. Hussie, Secretary, 2407 Cuming Street, Omaha, Nebraska.

Missouri Sheet Metal Contractors' Association, Statler Hotel, St. Louis, Missouri, June 25, 1923. Otto E. Scheske, Secretary, 3818 Maffitt Avenue, St. Louis, Missouri.

The National Association of Sheet Metal Contractors, St. Louis, Missouri, June 25 to 29, 1923. E. B. Langenberg, Secretary of St. Louis Convention Committee, 4057 Forest Park Boulevard, St. Louis Missouri; E. L. Seabrook, 608 Chestnut Street, Philadelphia, Secretary.

Ohio Sheet Metal Contractors' Association, Hotel Gibson, Cincinnati, Ohio, July 17, 18 and 19, 1923. William Miller, Secretary, Dayton, Ohio.

Sheet Metal Contractors' Association of Pennsylvania, Hotel Allen, Allentown, Pennsylvania, July 26 and 27, 1923. W. F. Angermeyer, Secretary, 714 Homewood Avenue, Pittsburgh, Pennsylvania.

The West Virginia Retail Hardware Association, Convention and Exhibit, Huntington, West Virginia, January 15 to 18, 1924. James B. Carson, Secretary-Treasurer, 1001 Schwind Building, Dayton, Ohio.

The Ohio Hardware Association, Convention and Exhibit, Cincinnati, Ohio, February 19 to 22, 1924. James B. Carson, Secretary-Treasurer, 1001 Schwind Building, Dayton, Ohio.

Retail Hardware Doings

Arkansas.

The Standard Hardware Company of Pine Bluff will open for business soon at 604 Main Street. Incorporators are: M. M. Gross, V. E. Guess, R. Carnahan and William Nichol, all of Pine Bluff, and V. Snow, O. S. Snow, N. H. Sample and T. D. Earle, of Camden.

Illinois.

M. E. Rafferty has sold the south side hardware store at Paris to the Index Novelty Company of Sullivan, Indiana.

Indiana.

Fire of unknown origin destroyed the hardware store of W. O. Springer at Dunkirk.

Perry Meisner has opened a hardware store at 900 South East Street, Indianapolis.

Iowa.

John E. Bowen has purchased the hardware stock of the Schermerhorn Hardware Company in the Cole Building, Maxwell.

Charles Reese, of Belmond, whose hardware store was destroyed by fire, has begun the construction of a new building.

Wisconsin.

At Antigo, A. L. Kommers will erect a new hardware store building.

Hoenig Brothers have sold their hardware stock at Chippewa Falls to the Farmers' Produce Company.

Haying and Harvesting Tool Window Display Which Made Cash Registers Ring for I. E. Swift Company, Houghton, Michigan.

H. F. Westcott and John Niemi Appeal to Farmers with Harvesting Tool Display.

YOUR store is perhaps located in a farming community. The major portion of your sales, therefore, are of a seasonal nature. If you want to make a real, successful window display that will keep your cash register ringing, get a list of

H. F. Westcott and John Niemi for the I. E. Swift Company, Houghton, Michigan. It will be remembered that these two gentlemen won the first prize in the AMERICAN ARTISAN Window Display competition. The prize-winning window

shears, scythe stones, lawn sprinklers, scale beams, mowing machine oilers, etc., The background was finished with a border of ruby red poppies and intermixed with green leaves.

"An arc-shaped platform covered



H. F. Westcott and John Niemi Arrange Seasonal Farm Tool Window Display for the I. E. Swift Company, Houghton, Michigan.

the things that the farmer uses in cultivating and harvesting his crops. Hay fork and carriers, scythes, grindstones, scythe stones, rakes, hay forks, oil, binder twine, Paris green and other spraying fluids, together with the spraying outfits are all necessities to the farmers at this time.

The accompanying illustrated window display was arranged by

display ran in the issue of April 7.

The description of the window is as follows:

"Ruby red and apple green together with the scenic background made an attractive color scheme for this display.

"Apple green crepe paper was used for the background surrounding the scene. Upon this were arranged scythes, grass hooks, grass

with ruby red crepe displayed hay carriers, hay fork pulleys, sprayers, oilers, scythes, etc. In front of this platform and on the floor, which was covered with apple green crepe paper, large grindstones, scythes, rakes, garden hose, sprayers, also paris green, etc., were neatly arranged.

"This window display reaped a harvest of sales."

Stove Salesmen of Pennsylvania Frolic at Evergreen's Farm House.

Sixty of These "Salt of the Earth" Knights of the Grip Have Fine Time at Annual Outing.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by
W. C. White, New York City.

THE Annual Outing of the Stove Salesmen's Association of Pennsylvania was held at the Evergreen Farm House, about seven miles outside of Philadelphia, on Saturday, June 16, 1923.

With few exceptions, the members and their guests met at the Arch Street side of the City Hall and motored to the camping grounds. The course was through Fairmount Park, which took in Philadelphia's beautiful surrounding country.

It surely was a happy crowd of "Young Fellows" that made up the party and when one considers that Bill Habicht, Bill Withers, Joe Borden, George Waggoner, Jim Wotherspoon, Harry Borzell, Jim Evans and Jim McGaw were there, it is easily seen that "a good time was had by all."

A buffet luncheon was served, together with some real thirst-quenching liquid, that met the approval of everyone.

The day was devoted to all sorts of pastime—cards, quoits, baseball and hand ball—and all in all it was a humdinger of an affair and the most successful outing ever staged in the history of the Association. The Entertainment Committee was on the job at all times and provided a wonderful program; nothing was overlooked. Their untiring efforts to make this affair a success were more than repaid. The attendance numbered more than 60.

A real jolly ball game was played and the umpire scored a laugh every minute—if the losing side was up he would call a strike a ball and five strikes (not three) were "out". The final score was something like 29-5 (officially), but for publication it was 23-22, with both sides taking the honors.

The stove salesmen are both indi-

vidually and collectively a bunch of real "he-men" and all good fellows and we are proud to be associated with them.

It is really remarkable, when one stops to think, that a social (trade) association has kept together for so many years, and here's wishing the Association and its members many, many more years of successful elbow to elbow good fellowship.

Joe Borden and Bill Habicht were glad to have an AMERICAN ARTISAN representative present, but both expressed their regrets that the assemblage did not include their old friend, Dan Stern, who is dear to the hearts of all.

After the ball game was over all the members and guests witnessed a very unique feature of the outing and that was the Kiddie Car race, the contestants being the three oldest members of the Association, whose time dates back to 1897, namely: William F. Habicht, Walter T. Hollowell and William G. Withers.

Another interesting feature of the afternoon was the game of quoits, in which Olly Fagley and Jim Evans, vs. Harry Borzell and Walt Hallowell contested for the championship of the Association. We are pleased to say, however, that the game was a tie. (This was not run and scored like the base ball game.)

At the conclusion of the sports indulged in during the day, dinner was in readiness, which consisted of "everything from soup to nuts". It was an elaborate setting and after the usual tete-a-tete, which lasted until after 6 P. M., many made their departure, although some remained and found many sources of pleasure. It was a full day's enjoyment and the members of the Stove Salesmen's Association of Pennsylvania

should feel proud of their Association and of the men who, through their energies, have yet to mark a failure.—Yours for continued success.

Bill Withers likes to play cards—but never without his brown silk cap.

Bill Habicht is the custodian of the cigars and cigarettes and carries them in a combination safe grip. He thought he was "touched" for half of the contents of the box, but we found the cigars upstairs and smoked them up. He also kept the baseball score.

Joe Borden is always smiling and has a good word for all—also an occasional prescription.

Jim Wotherspoon recently purchased a palatial yacht in Florida. It is now in order to address our good friend as "Captain, aye aye, sir."

Walt Hallowell certainly knows how to throw the quoits and the young fellows had quite a job to tie him.

The two J's—McGaw and Evans—are the money men and hard to beat. The former collects and the latter keeps—try to get a postage stamp without a voucher.

Harry Borzell is another "regular fellow" whose memory goes back many years and he knows them all.

The Klein boys are of the progressive type and are liked by everyone.

(Apologies to the other shining lights that are not recorded.)

Among those present:

Members—J. William Abbott, J. E. Barker, James Black, Charles F. Bechtel, Josiah B. Borden, David Bowers, Harry E. Borzell, David Crawford, J. Conlogue, A. L. Danner, Walter Dome, William Evans, William Clendenning, John S. Conrad, William P. Eckfeldt, Joseph Evans, Walter T. Hallowell, Oliver Fagley, Fred. Fluck, Robert J. Garrett, William F. Habicht, Gus and Nathan Klein, Albert J. Kochel, Herbert V. Jennings, Lee S. Leiser, Elwood Lynn, L. A. Larzellers, James McGaw, John R. McKnight, John Meyers, Andrew L. Rival, Cuyler D. Rees, Frederick Sabin, John E. Starr, F. E. Saxton, Alvin

G. Sherwood, R. Thomas, George Wagoner, William H. Withers, James R. Wotherspoon.

Guests—John Gleichman, George L. Woodburn, Benjamin Weiner,

Harry Klein, John Arvord, E. M. Schissler, D. W. Fagley, D. Walters, K. C. Farnsworth, Russell Bowers, Robert Dennis, Charles Wagoner, W. C. White.

Business-Getting Stove Display Which Appeals to Sense of Taste and Comfort for Sales.

Arnold E. Neufeld Believes in Showing a Woman What She Can Do with the Product in Order to Make Sales.

ONE of the easiest and quickest ways of attracting attention to and creating a desire in the mind of the prospective buyers for the object you wish to sell, is to make a display which shows the object in operation. A woman is always willing to be shown how she can reduce the amount of work she must do to a minimum. She is not so much interested in how the thing is made as how it will look and operate. Show some of the things the stove will bake or cook; let her taste them and see the actual finished product

one, but the principles which go to make up an attractive and business-getting window are all present.

Mr. Neufeld makes the following comment on the display:

"After washing the window, light gray oatmeal paper was used to cover the floor.

"National advertising posters mounted on beaver board were used well up in front of the window to catch the shoppers' eyes. Aluminum helped to complete the picture.

"A two-burner and a three-burner stove, both with cabinet,



Stove Window Display Arranged by Arnold E. Neufeld for Antigo Hardware Company Which Sold Many Stoves.

and she will manage to arrange her budget so as to include the new stove in her list of purchases.

In the illustration is seen a display of Florence oil stoves arranged by Arnold E. Neufeld for the Antigo Hardware Company, Antigo, Wisconsin.

This window display is not a large

were placed one on each side of window.

"In the center front an oven was placed. In the center rear an oil heater, thus displaying the three products handled.

"A few baskets of flowers and a homey background completed an effective window."

\$100,000 Addition to Be Built to Large Stove Plant of Lindemann-Hoverson.

Additions to the plant of the Lindemann, Hoverson & Company, Milwaukee, Wisconsin, costing \$100,000 will be built. The Company manufactures stoves and ranges and sheet metal heaters and owns the Alcazar Stove & Range Company, Milwaukee. The works are situated at Twenty-third and Cleveland Avenues. A. J. Lindemann, President and General Manager, returned a short time ago from an extensive business trip through Great Britain and the Continent.

Shelton Vapor Stove Company Is Incorporated for \$100,000 in Indianapolis.

The Shelton Vapor Stove Company, Indianapolis, has been incorporated with a capital stock of \$100,000. Directors are Thomas J. Kelly, Ira S. Dowing and Maurice C. Shelton.

Harry A. Miller Resigns From Summit Stove Company.

Harry A. Miller, who became Vice-President and Treasurer of the Summit Stove Company, Morrison, Illinois, at its reorganization about two years ago, has disposed of his interests in the Company and resigned as an officer and Salesmanager, the resignation taking effect July first.

Mr. Miller has many friends in the stove and furnace field and will no doubt soon be found in a responsible position with another company.

In this day of Fords and tractors, etc., the hardware dealers in many towns have found the automobile accessory brand a very profitable side line—and not always a side line either. It is, however, incumbent upon the dealer who contemplates handling this line to look well to his wares first that he may look to his laurels last and see to it that he carries a complete line of electrical goods as well.

*Make Your Advertising Copy "Smack" of the Delicious
Cakes Your Stoves Will Bake by Associating
Explanation and Illustrations with Experiences
Familiar to Prospective Customers.*

*A New Recipe for a Cake Quoted in an Ad
Will Excite Interest in the Majority of Women.*

FOR reasons the McCullough Hardware Company, Burney, Indiana, believes in keeping its name before the public. Even though no

ception is good, while there is little left to be desired in the spacing. The firm name set in bold-face is a good practice.

so as to give as wide range as possible to the housewife's time.

"A full-sized angel food cake will be given away at 3:00 p. m. each day." This little piece of strategy is enough in itself to bring all the women in town into the store.

Perhaps the ad could have been made a little more specific by quot-

**We carry a full line of
Hardware
Heating and Cooking
Stoves**

**Paints, Oils, Varnishes
Harness, Halters, Bridles
Cutlery of all kinds**

**McCullough Hardware Co
Burney, Indiana**

**Unusual and Interesting
Stove Demonstration**

At Our Store

TUESDAY—WEDNESDAY—THURSDAY

Showing the Splendid Results That Can Be Obtained
When Doing "Whole Meal" Cooking, Baking
and Canning on a

Quick Meal Gas Range

EQUIPPED WITH A

Lorain Oven Heat Regulator

Come and see how you can put an entire meal of meats, vegetables and a dessert in the OVEN at noon and cook it until you want to serve it at night without any watching or fear that it will burn. This will save you about one-third of your gas bill each month and many hours in the kitchen.

A FULL SIZE ANGEL FOOD CAKE WILL BE GIVEN
AWAY AT 3:00 P. M. EACH DAY.

"WHOLE MEALS" Displayed From 3:00 to 6:00 p. m.

**Barrow Furniture Co.
INCORPORATED**

ing the price at which the regulator was being sold, but it is taken for granted that during the course of the demonstration the price will come out. Then, too, if a factory representative was making the demonstration, this should have been mentioned in the ad, as a reference to factory representative usually lends increased dignity to the demonstration, increases the element curiosity and also instills confidence.

Taken on the whole, this add is a well-directed piece of copy and undoubtedly served its purpose well.

special offer is being made, this firm feels the desirability of constantly reminding the public that it carries a complete line of heating and cooking stoves, paints, oils, leather goods and cutlery, as will be seen in the accompanying reprint of the ad of the firm as it appeared in the Greensburg, Indiana, *Times*.

The advertisement is very well set up. The centering with one ex-

"Unusual and Interesting" is the manner in which the Barrow Furniture Company introduced the subject of a stove demonstration at its store.

This advertisement was designed chiefly to attract the women into the store.

Note that the days selected were placed in the middle of the week rather than at the beginning or end,

General Trade Continues Active; Large Freight Movements Indicate Confidence and Large Trade Activities.

Seasonal Causes, Some Excessive Production and Diminished Demand Make for Weakness in a Few Commodities—Copper Strong, Other Metals Easy.

THERE has been no change of any consequence in business conditions this week and there is a growing feeling that unless some great constructive development occurs, such as the settlement of the reparations question, that trade will have to depend on the momentum acquired during the first quarter to carry it over the Summer months.

In almost all industries current bookings are considerably less than current shipments, but the noteworthy absence of cancellations and prompt specifications against outstanding contracts is evidence that the enormous producing and manufacturing operations of the past five months have not caused an oversupply.

Copper.

Following the good copper business last week, some of the large agencies advanced their prices $\frac{1}{8}$ cent to 15.25 cents, but others continued to quote 15.12 $\frac{1}{2}$ cents delivered.

Outside prices were at a premium, both for export and for domestic account, up to 15.25 cents f.o.b. refinery and f.a.s. being paid by dealers, but the market slumped.

The statistical position of the copper market continues strong. May deliveries being reported as 190,000,000 pounds, foreign and domestic, against refined production of about 185,000,000 pounds.

Casting copper fluctuated the past week between 14.75 cents and 14.87 $\frac{1}{2}$ cents refinery. Lake was quoted 15.37 $\frac{1}{2}$ cents delivered.

Tin.

The local tin market is somewhat steadier throughout the week than for some time. Considerable business has been done in Straits tin for July, August and September deliveries at from 39.87 $\frac{1}{2}$ cents to 40.00 cents. All offerings at less than

40.00 cents appear to have been taken and the future market is firmly established on this basis.

The buying was about equally distributed between dealers and consumers, the latter having been attracted by the opportunity to buy at the lowest price recorded in four months.

There is not much call for prompt Straits but the price continues to be maintained at a premium of $\frac{1}{4}$ cent above futures.

Ninety-nine per cent tin is in good demand, but spot supplies are so small and so closely held that it is very difficult to obtain quotations on carload lots.

Zinc.

The zinc market is quiet but steady at 6 cents a pound East St. Louis.

There was, however, some show of resistance against breaking through the general quotation of 6.00 cents East St. Louis basis for prime western, but this was largely due to the fact that the only bids from operators were too far below that figure to receive consideration.

Demand from consumers continues light, and as there is still a good deal of early shipment metal that needs marketing it seems hardly likely that 6.00 cents can be maintained. In fact there are reports today of this price being shaded for prompt delivery.

Lead.

The lead market is continuing unchanged at 7 $\frac{1}{4}$ cents, New York, and 6.90 cents at St. Louis.

The statistical position of lead is good and stocks are even smaller now than in the excited markets of a few months ago.

The principal smelting interests have no accumulation and the prospects point to a continuation of this condition for some time to come.

Stocks of lead are small in consumers' hands generally also. The reports from the chief consuming lines indicate but little falling off in the volume of their requirements as far ahead as estimates can reasonably extend. But conservatism has extended to sellers as well as buyers, so that the holders of what spot lead is available are not disposed to tighten up—rather the contrary.

Prompt shipment is offered at 6.92 $\frac{1}{2}$ cents East St. Louis basis, and bids of 6.90 cents would undoubtedly be accepted. Current orders are, however, light.

Solder.

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$27.25; Commercial 45-55, \$26.25, and Plumbers', \$23.00.

Tin Plate.

There is now a heavy pressure upon tin plate mills both for shipment or remaining tonnages bought for the current quarter and for shipment in July and August for tin plate, bought for third quarter.

There does not appear to be much new buying at the moment, but with such a call for prompt filling of orders already placed it would be expected that there would be a fair volume of new buying, if any mills were found in position to make the desired deliveries. The price cannot be standing in the way, for there are few if any regular sellers who will not sell at the standard price of \$5.50 if they are in position to sell.

There is little interest in September deliveries, while there is no interest in fourth quarter. This latter point means nothing, however, since the tin plate price was made only for third quarter, the mills leaving the fourth quarter for later action. It would be very remarkable for buyers to approach mills on fourth quarter when the mills had post-

poned action. The buyer would be putting himself in a false position.

While there is little if any disposition to quote more than \$5.50 on tin plate the market is far from easy at that price. There is not the slightest hint that any shading could be done.

Production is running much the same as formerly, at probably slightly over 750,000 base boxes a week.

Independents are operating slightly more than 85 per cent of their mills, the leading interest doing somewhat less than 85 per cent.

Sheets.

The major portion of the attention in the sheet mills is being expended in efforts to discharge obligations already on the books. There is a lull in new buying within specified period.

The leading interest and independents alike are feeling the shortage of skilled workmen for the hot mills and this condition will not improve during the summer months.

No concessions in price are noted, although several reports are heard that black sheets can be bought at 3.75 cents. The market is quoted firmly at 3.85 cents, base Pittsburgh.

Galvanized sheets are obtainable from various independent interests at 5.00 cents.

Blue annealed sheets are quoted at 3.00 cents to 3.25 cents, and full finished automobile sheets are unchanged at 5.35 cents to 5.70 cents base Pittsburgh.

In connection with the latter and one or two other grades used in automobile construction, some suspension in buying is noted by Michigan interests in an effort to develop lower quotations. This is not resulting successfully in this territory.

The general average of sheet mill operations appears to remain between 80 and 85 per cent of capacity. This will be greatly lowered during the first week in July when shutdowns will be fairly general for the purpose of making repairs, etc.

Old Metals.

Wholesale quotations in the Chicago district, which should be con-

sidered as nominal, are as follows: Old steel axles, \$21.00 to \$21.50; old iron axles, \$27.00 to \$27.50; steel springs, \$22.00 to \$22.50; No. 1 wrought iron, \$15.50 to \$16.00; No. 1 cast, \$18.50 to \$19.00, all

per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 9½ cents; light brass, 5 cents; lead, 5 cents; zinc, 3½ cents; and cast aluminum, 15½ cents.

Concessions by Producers and Resale Offerings Cause Pig Iron Prices to Soften; Buyers Close Only as Requirements Press.

Production Decreases Slightly, Due to Torrid Weather Conditions—Prices of Foundry Iron Have Declined from \$1 to \$2 a Ton.

IRON and steel conditions, in a broad way, are unchanged. Buyers, while regaining confidence gradually and are placing a larger new tonnage with producers, are not closing liberally and incoming business falls much short of matching shipments which are extraordinarily heavy in keeping with production.

Cautious buying of pig iron still is the rule, though the number of small sales for nearby shipment continues to grow.

There are indications at Chicago and other points that the third quarter market may be entered upon a spot basis as the bulk of the buying is yet to be done for that period.

At the same time more is being heard of foundries being in an overbought position on their second quarter needs because of labor shortages.

A leading automobile interest has released 10,000 tons. The Chicago market is down \$1 and in the valleys, 50 cents. Apart from recent offerings of special Tennessee iron at \$25.50 base, southern iron has been quoted at \$26 Birmingham by some sellers.

Deliveries are moving up but only slowly. The strong points of the situation remain the way in which tonnage is being absorbed by users of material up to the limit of record-breaking output and the complete absence of requests for the suspension and cancellation of orders. Barring minor exceptions, prices display fundamental firmness.

Torrid weather conditions in steel

producing centers have brought about a slight decrease in production. The plants of the United States Steel corporation have reduced activity by 1 per cent owing to the weather, and independents are working on an 85 per cent basis in comparison with 90 per cent.

A number of steel companies have taken orders in June at a greater rate than in May, buying for third quarter being on a scale pointing to well sustained operations for many weeks. Consumption and prices show but fractional change, with little holding up of deliveries and notably few cancellations.

May bookings of fabricators were 131,000 tons, or 58 per cent of capacity, against an average of 190,000 tons in the first four months of the year. Prices of foundry pig iron have declined from \$1 to \$2 a ton from recent nominal quotations in the Pittsburgh district and at Chicago prices have been reduced \$1 without developing business.

At Birmingham new business is in small lots only. A better feeling is apparent. Alabama furnace companies have as yet made no concessions. The price is firmly held at \$27. Melt in home territory and the shipment of product exceed iron production.

A recession in pig iron to \$31 has occurred at Chicago, caused by the appearance of resale iron and stagnation in the market.

Anybody will make a mistake once. "Fools make the same mistakes twice."

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

FIG IRON.

Chicago Foundry...	32 00
Southern Fdy. No. 2	33 01
Lake Sup. Charcoal	36 66
Malleable	32 00

FIRST QUALITY BRIGHT TIN PLATES.

	Per Box
IC 14x20 112 sheets	\$12 45
IX 14x20	14 05
IXX 14x20 56 sheets	17 57
IXXX 14x20	18 12
IXXXX 14x20	18 66
IC 20x28 112 sheets	27 50
IX 20x28	29 85
IXX 20x28 56 sheets	16 15
IXXX 20x28	17 20
IXXXX 20x28	18 25

TERNE PLATES.

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 60
IX 20x28, 40-lb.	28 50
IC 20x28, 30-lb.	21 80
IX 20x28, 30-lb.	24 70
IC 20x28, 25-lb.	20 80
IX 20x28, 25-lb.	23 70
IC 20x28, 20-lb.	18 30
IX 20x28, 20-lb.	21 15
IC 20x28, 15-lb.	17 05
IX 20x28, 15-lb.	15 75
IC 20x28, 8-lb.	14 05

COKE PLATES.

Cokes, 80 lbs., base, 20x28.	\$14 05
Cokes, 90 lbs., base, 20x28.	14 30
Cokes, 100 lbs., base, 20x28.	14 65
Cokes, 107 lbs., base, IC	
20x28	15 10
Cokes, 135 lbs., base, IX	
20x28	17 15
Cokes, 155 lbs., base, 56 sheets	9 30
Cokes, 175 lbs., base, 56 sheets	10 10
Cokes, 195 lbs., base, 56 sheets	10 95

BLUE ANNEALED SHEETS.

Base	per 100 lbs. \$4 00
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ONE PASS COLD ROLLED BLACK.

No. 18-20	per 100 lbs. \$5 00
No. 22-24	per 100 lbs. 4 85
No. 26	per 100 lbs. 4 90
No. 27	per 100 lbs. 4 95
No. 28	per 100 lbs. 5 00
No. 29	per 100 lbs. 5 10

GALVANIZED.

No. 16	per 100 lbs. \$5 60
No. 18-20	per 100 lbs. 5 75
No. 22-24	per 100 lbs. 5 90
No. 26	per 100 lbs. 5 95
No. 27	per 100 lbs. 6 20
No. 28	per 100 lbs. 6 35
No. 30	per 100 lbs. 6 35

BAR SOLDER.

Warranted 50-50	per 100 lbs. 27 25
Commercial 45-55	per 100 lbs. 26 25
Plumbers	per 100 lbs. 23 00

ZINC.

In Slabs	5 37
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SHEET ZINC.

Cask lots, stock, 100 lbs.	11 00
Less than cask lots, 100 lbs.	11 50

BRASS.

Sheets, base	20 1/2 c
Tubing, seamless, base	25 1/2 c
Tubing, brazed, base	28 1/2 c
Wire, base	21 c

COPPER.

Sheets, Chicago base	24 1/2 c
Mill Base	23 1/2 c
Tubing, seamless, base	27 c
Wire, No. 9 & 10 B. & S. Ga.	22 1/2 c
Wire, No. 11 B. & S. Ga.	22 1/2 c

LEAD.

American Pig	6 90
Bar	7 90

Sheet	
Full Coils	per 100 lbs. 10 75
Cut Coils	per 100 lbs. 11 75

TIN.

Pig Tin	41 1/2 c
Bar Tin	43 1/2 c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR HEATER FITTINGS AND ACCESSORIES.

ADZES.

Coopers'	
Barton's	Net
White's	Net

AMMUNITION.

Shells, Loaded, Peters.	
Loaded with Black Powder 18%	
Loaded with Smokeless Powder	18%

Winchester.

Smokeless Repeater	
Grade	20 & 4%
Smokeless Leader	
Grade	20 & 4%
Black Powder	20 & 4%

U. M. C.

Nitro Club	20 & 4%
Arrow	20 & 4%
New Club	20 & 4%

Gun Wads—per 1000.

Winchester 7-8 gauge 10 & 7 1/2 %	
" 9-10 gauge 10 & 7 1/2 %	
" 11-28 gauge 10 & 7 1/2 %	

ASBESTOS.

Paper up to 1/16	6c per lb.
Rollboard	6 1/2 c per lb.
Millboard 3/32 to 1/4	6c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6.00 per roll

AUGERS.

Boring Machine	40 & 10%
Carpenter's Nut	50%
Hollow.	
Stearns, No. 4, doz.	\$11 50
Post Hole.	
Iwan's Post Hole and Well	25%
Vaughan's, 4 to 9 in.	\$15 60

AXES.

First Quality, Single Bitted (unhandled, 3 to 4 lb., per doz.)	\$14 00
Good Quality, Single Bitted, same weight, per doz.	13 00

BAR, CROW.

Steel, 4 ft., 10 lb.	\$ 80
Steel, 5 ft., 18 lb.	1 40
Pinch bars.	
5 1/2 ft., 24 lb.	1 60

BAR, WRECKING.

V. & B. No. 12	\$0 34
V. & B. No. 24	0 42
V. & B. No. 32 1/2	0 57
V. & B. No. 36	0 48
V. & B. No. 330	0 63

BITS.

All Vaughan and Bushnell.	
Screw Driver, No. 30, each	\$ 27
Screw Driver, No. 1, each	16
Reamer, No. 80, each	41
Reamer, No. 100, each	41
Countersink, No. 13, each	20
Countersink, Nos. 14-15 each	27

BLADES, SAW.

Wood.	
Atkins 30-in.	
Nos.	6 40 26
	\$8 90 \$9 45 \$5 40

BLOCKS.

Wooden	45%
Patent	45%

BLOW TORCHES (See Fireports).

BOARDS.

	Per Doz.
28x36, wood lined	\$14 45
28x36, " "	16 95
30x30, " "	19 00
26x26, paper lined	8 15
28x28, " "	9 10
30x30, " "	10 80

Wash.

No. 760, Banner Globe (single)	per doz. \$5 25
No. 652, Banner Globe (single)	per doz. 6 75
No. 301, Brass King	per doz. 8 25
No. 869, Single-Plain Pump	6 25

BOLTS.

Carriage, Machine, etc.	
Carriage, cut thread, 1/2 x 6 and sizes smaller and shorter	45-5%
Carriage sizes, larger and smaller and shorter	40-5%
Machine, 1/2 x 4 and sizes smaller and shorter	50%
Machine, sizes larger and longer than 1/2 x 4	40-10%
Stove	70-5%

BRACES, RATCHET.

V. & B. No. 444 8 in.	\$4 54
V. & B. No. 222 8 in.	3 89
V. & B. No. 111 8 in.	3 55
V. & B. No. 11 8 in.	3 02

BURRS.

Copper Burrs only	30%
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BUTTS.

Steel, antique copper or dull brass finish—case lots—3 1/2 x 3 1/2—per dozen pairs	\$3 48
4x4	4 74

Heavy Bevel steel inside sets, case lots—

per dozen sets	8 00
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Steel bit keyed front door sets, each

2 00	
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Wrought brass bit keyed front door sets, each

4 00	
------	--

Cylinder front door sets, each

8 50	
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CARRIERS.

Hay.	
Diamond, Regular	each, net
Diamond, Sling	" "

CATCHERS, GRASS.

Wire frame, adjustable bottom, white duck, for 12" to 16" mowers, dozen	\$9 00
Same kind for 16" to 20"	10 50

CEMENT, FURNACE.

American Seal, 5 lb. cans, net	\$ 45
" 10 lb. cans, "	90
" 25 lb. cans, "	2 00
Asbestos, 5 lb. cans	45
Pecora	per 100 lbs. 7 51

CHAINS.

Proof Coll. 1/2" 100 lbs.	\$ 9 75
American Coll	40-10%
Electric Cow Welded Ties	
No. 00, 4 1/2, per doz.	3 00

CHIMNEY TOPS.

Iwan's Complete Rev. & Vent.	30%
Iwan's Iron Mountain only	35%

CHISELS.

Cold.	
V. & B. No. 25, 1/4 in., each	\$0 26
V. & B. No. 25, 1/2 in., each	41

Diamond Point.

V. & B. No. 55, 1/4 in.	0 31
V. & B. No. 55, 1/2 in.	0 48

Firmer Bevelled

Round Nose.	
V. & B. No. 65, 1/4 in.	0 29
V. & B. No. 65, 1/2 in.	0 40

Socket Firmer.

Cape.	
V. & B. No. 50, 1/4 in.	0 31
V. & B. No. 50, 1/2 in.	0 57

CHUCKS, DRILL.

Goodell's for Goodell's Screw Drivers	List less 35-40%
Yankee, for Yankee Screw Drivers	\$6 00

CLAMPS.

Adjustable.	
Martin's	30%
No. 63, Screw	20%
No. 100, Door (Stearns)	
doz.	\$22 00

Carpenters'.

Steel Bar	List price plus 20%
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Carriage Makers'.

3 1/2-inch	per doz. \$7 00
5 -	14 00
8 -	28 00
12 -	42 00

Hose.

Sherman's brass, 1/4-inch per doz.	\$0 43
Double, brass, 1/4-inch, per doz.	1 20

CLIPPERS.

Bolt (Carolus).	
No. 0	33 50
No. 1	3 25
No. 3	4 25

CLIPS.

Dumper.	
Acme, with tail piece,	
per doz.	\$1 25
Non Rivet tail piece,	
per doz.	25
Non Rivet Clips	25
Hame	55

COPPERS—Soldering.

Pointed Roofing.

3 lb. and heavier	per lb. 40c
2 1/2 lb.	45c
2 lb.	48c
1 1/2 lb.	55c
1 lb.	60c

CORD.

No. 7 Std. per doz. banks	\$10 50
No. 8	12 50

COUPLINGS, HOSE.

Brass	per doz. \$2 25
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CUT-OFFS.

Standard gauge	35%
26 gauge	20%
Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd.	
Standard gauge	40%
26 gauge	10%

DAMPERS, STOVE PIPE.

Diamond.	
6-inch	per doz. \$1 65

Cast "American."

6 inch per doz.	\$1 55
7 " "	2 25
8 " "	2 50
9 " "	2 50
10 " "	2 50
12 " "	3 00

Check.

7 inch, each	\$1 00
8 " "	1 25
9 " "	1 50
10 " "	1 75
12 " "	2 25
Hot Air	40-10%

DIGGERS.

Post Hole.	
Iwan's Split Handle (Eureka)	
4-ft. Handle	per doz. \$14 00
7-ft. Handle	per doz. 36 00
Iwan's Hercules pattern,	
per doz.	14 90

DRILLS.

V. & B. Star, 12-inch Length.	
1/4, 5/16 and 3/8, each	\$ 25
1/2, each	35
1, each	54
1 1/2, each	81
V. & B. Star, 18-inch Length.	
5/16 and 3/8, each	\$ 35
1/2, each	45
1, each	69
1 1/2, each	1 05

EAVES TROUGH.